ERHVERVSSTYRELSEN

The Danish Business Authority
XBRL Taxonomy Framework Architecture

Status: final
Document version: 1.0
Document date: 2015-10-01

Index

1   Introduction

The purposes of this document it to present and explain the architecture of the framework of XBRL taxonomies created by the Danish Business Authority[1] [DCCA]. In particular, it explains the scope (coverage of information requirements), modularization in files, manner of defining concepts and relations and other important design aspects.

This document is aimed at users of the DCCA taxonomy, in particular business users working with the taxonomy in order to produce instance documents (by applying mappings to internal systems or assigning XBRL tags with values in any other manner) as well as developers of IT solutions facilitating reporting in the XBRL format or analysis of XBRL data.

2   Scope of the framework

The DCCA XBRL taxonomy framework reflects information requirements for mandatory filings submitted by registered entities to the Danish Business Authority as well as to other cooperating agencies, institutions and authorities in Denmark.

Under the current version, the scope of the framework is limited to the following acts:
-    the Danish Annual Accounts Act as of 1st November 2013[2] - last changed 1st of June 2015 (for the scope of regulations applying to class-B and class-C companies, solo and consolidated financial statement),
-    the Danish Executive Order on Approved Auditor's Reports as of 17th of April 2013[3],
-    complemented with the common practice information recognized by the Danish Business Authority.

The framework contains also a set of extension concepts that can be used by reporting entities to provide information on their annual accounts to the Statistics Denmark[4] and the Danish Tax Authority[5] as well as general and submission data on the reporting entity and the report itself.

3   Components of the framework

The DCCA XBRL taxonomy framework consists of sets of taxonomy files reflecting regulations of certain acts or additional reporting requirements. The overview diagram of the DCCA XBRL taxonomy framework is presented on Fig 1 below.
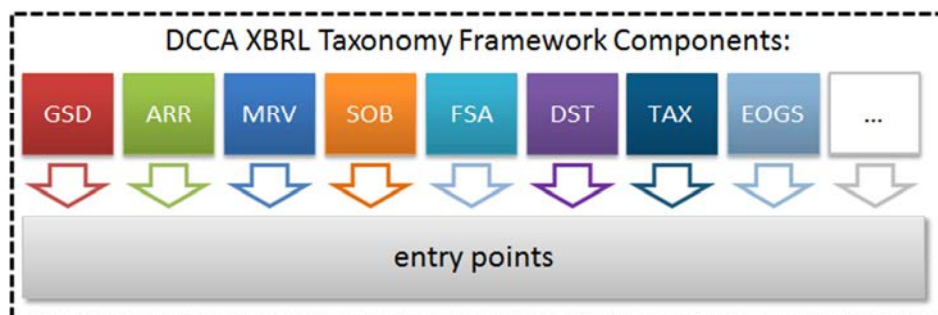
Fig 1

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[1] http://www.erst.dk/
[2] https://www.retsinformation.dk/Forms/R0710.aspx?id=158560
[3] https://www.retsinformation.dk/Forms/R0710.aspx?id=146315
[4] http://www.skm.dk/
[5] http://www.skm.dk/

Explanation of abbreviations used on the diagram presented on Fig 1:

- **GSD – general and submission data** (generelle indberetningsdata mv): contains information on submission, reporting entity and a report itself, such as reporting period covered, submitting and reporting entity registration and contact data, information on auditors, financial institutions and law firms representing reporting entity as well as members of executive and supervisory boards,
- **ARR – approved auditor's reports** (revisor erklæring): represents information requirements defined in the Danish Executive Order on Approved Auditor's Reports with regard to report on audited financial statements, review of financial statements or other assurance reports,
- **MRV – management's review** (ledelses beretning): represents the content of the Management's review as defined by the Danish Annual Accounts Act extended by common practice requirements recognized by the Danish Commerce and Companies Agency,
- **SOB – statement of boards** represents the content of the Statement by executive and supervisory boards as defined by the Danish Annual Accounts Act,
- **FSA – financial statements** (Resultat opgørelse og balance): reflects information requirements defined in the Danish Annual Accounts Act as well as common practice information recognized by the Danish Commerce and Companies Agency, including balance sheet in account and report form, income statement by nature and by function, proposed distribution on results, cash flow statement, statement of changes in equity, disclosures on true and fair view, going concern, accounting policies, assets, liabilities, provisions, equity, income statement, related parties and other disclosures,
- **DST – the Statistics Denmark** (Danmarks Statistik): contains extension concepts that can be used by reporting entities to provide information on their annual accounts to the Statistics Denmark,
- **TAX – the Danish tax authority** (SKAT): defines concepts that can be submitted together with the annual accounts for the purpose settling the tax obligation,
- **EOGS – Danish Business Authority (Erhvervs- og Selskabsstyrelsen)**: defines concepts that can be submitted to EOGS other than annual accounts.

It is expected that the framework in future is closely coordinated with the Danish extension of the IFRS taxonomy. Architecture of the framework already takes this situation into account and the decisions on design were motivated by anticipation of such extension and further growth of the coverage of information requirements.

The framework has been modularized in sets of taxonomy files that are referred from entry point files depending on specific reporting requirements in order to allow for reuse of concepts related to

global and submission data or based on different legislations (Danish GAAP or IFRSs) for tax and statistics purposes.

4 Location and modularization in folder and files

4.1 Location

The official root location of all files in the framework (root URL) is *http://archprod.service.eogs.dk/taxonomy/*. This domain is under control of the authority publishing the taxonomy which is the DCCA.

Components of the framework are placed in folders under the root URL followed by the date of publication according to the pattern: *{root URL}/{date of publication in format yyyymmdd}/{optional: abbreviated three letter name of a component of the framework}/{file name}.*

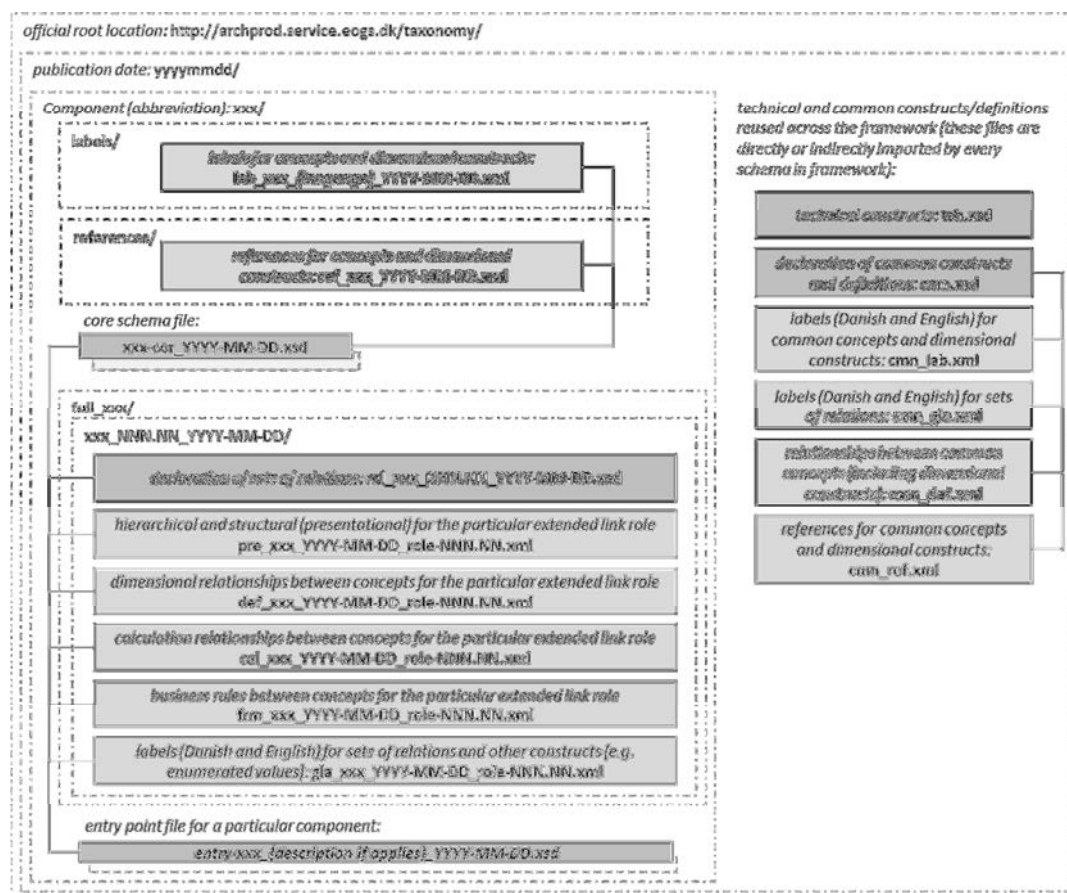Information about official location of each file is embedded in each file as `officialURI` processing instruction (e.g. `<?officialURI`
`http://archprod.service.eogs.dk/taxonomy/20151001/fsa/fsa.xsd?>`).

4.2 Modularization in folders and files

General structure of folders and files inside of the official location is presented on Fig 2.

Fig 2

As explained above the framework is defined in the root location
http://archprod.service.eogs.dk/taxonomy/ followed by the folder named after the publication date
(using the date format *YYYYMMDD*). Inside of this folder there are:

A. XBRL schema and linkbase files for technical constructs (*tch.xsd*) and declaration of common
   constructs and definitions (*cmn.xsd, cmn_lab-en.xml, cmn_lab-da.xml, cmn_lab-{**language**},
   cmn_gla-en.xml, cmn_gla-da.xml cmn_def.xml*, etc.) reused across the framework,
B. folders for each component of the framework (*xxx* – three letter abbreviation of component's
   name),
C. entry point schema files.

4.2.1   Technical and common constructs

Technical constructs reused across the entire framework are defined in the *tch.xsd* schema file.
Currently, this schema file:

- imports all necessary XBRL technical schema files, i.e. XBRL 2.1
  (*http://www.xbrl.org/2003/xbrl-instance-2003-12-31.xsd*), XBRL Dimensions 1.0
  (*http://www.xbrl.org/2005/xbrldt-2005.xsd*), XBRL Generic Link
  (*http://www.xbrl.org/2008/generic-link.xsd*) and XBRL Generic label
  (*http://www.xbrl.org/2008/generic-label.xsd*) specifications schema files, XBRL International
  registry of additional data types (*http://xbrl.org/dtr/type/numeric-2009-12-16.xsd*,
  http://xbrl.org/dtr/type/nonNumeric-2009-12-16.xsd), reference parts
  (*http://www.xbrl.org/2006/ref-2006-02-27.xsd*), etc.,
- defines technical constructs that are custom to the DCCA taxonomies and expand the syntax
  of XBRL specifications (e.g. `preferredLabel` attribute that is used on definition arcs).

Common constructs and definitions reused across the entire framework are declared in the *cmn.xsd*
XBRL schema file and the supporting linkbase files (*cmn_lab-en.xml*, *cmn_lab-da.xml cmn_gla-en.xml,
cmn_gla-da.xml cmn_def.xml*). These files contain declarations of common XBRL concepts (applicable
for different components and that cannot be exclusively ascribed to any of them), `roleType`s used on
extended links and relations. For example, the common constructs include declaration of a container
(`roleType` used on definition extended links) for storing relations between dimensions and their
default members (see Section 10 for details). They also contain definition and relations for dimension
used for distinguishing between the solo and consolidated data that is applied to every concept
within the framework (regardless of the component, hence described as a common construct). It
may also include declaration of reportable concepts that are not exclusively defined by any of the
components but reused in more than one (e.g. concepts shared by the DST and TAX that are not GSD
or FRS).

4.2.2   Components of the framework

Each component of the framework is represented by a separate folder named after to the three
letter abbreviation describing its content. This folder includes:

- an XBRL schema file containing definitions of concepts (items) and dimensional constructs
  (i.e. hypercube items, dimension items and domain members) and names for sets of
  relationships (`roleType`s); this file is named after the component of the framework (three
  letter abbreviation);

- a linkbase files containing Danish (da), English (en), German (de), French (fr), Spanish (es), Russian (ru), Chinese (zh) an Portuguese (pt) standard and specific purpose labels for concepts and dimensional constructs defined by a schema file for a component; these files are named after a component of the framework followed by _lab-xx_ identifiers of the type of the extended link contained (in this case `labelLink`); these linkbase files are referenced from a schema file for a component;

- a generic linkbase files containing Danish and English labels for sets of relations (`roleType`s) or other artefacts (e.g. enumerations in custom data types) defined by a schema file for a component; these files are named after a component of the framework followed by _gla-en_ or _gla-da_ identifiers of the type of the extended link contained (in this case `gen:link` containing generic labels); these linkbase files are referenced from a schema file for a component;

- zero or more linkbase files containing references for concepts and dimensional constructs; this file is named after a component of a framework followed by _ref_ identifier of the type of the extended link contained (`referenceLink`); this linkbase file is referenced from a schema file for a component;

- one or more linkbase files containing relationships between concepts and dimensional constructs created in standard (XBRL 2.1) presentation linkbase as well as definition linkbase using arcs and arcroles as defined in the XBRL Dimension 1.0 Specification (extended with a specific application of the `preferredLabel` attribute); naming convention for these files begins with optional three-digit ordering number plus three-letter identification (abbreviation) of the contained relations followed by _pre_ or _def_ identifier of the type of the extended link (`presentationLink or definitonLink` respectively); these linkbase files are not referenced from the schema file for a component of the framework; instead, they are extended in linkbase files containing cross-components definitions or referenced directly from entry schema files,

- one or more formula linkbase file (according to XBRL Formula Specification 1.0) containing validation checks (such as requirement of reporting certain concepts) and error messages in English and Danish for unsatisfied test; naming convention for these files begins with optional three-digit ordering number plus three-letter identification (abbreviation) of the contained relations followed by _frm_; these linkbase files are not referenced from the schema file for a component of the framework; instead, they are extended in linkbase files containing cross-components definitions or referenced directly from entry schema files.

4.2.3 "Entry point" filer Entry point files

Entry points are schema files referring to linkbases defined in components folders or to cross-component linkbase files. These are the schema files that are referenced from instance documents (reports) filed by reporting entities. They allow classifying submitted reports in terms of reported components (e.g. including/excluding statistics and/or tax, applied variants of income statement/balance sheet, etc.). The name of the entry point files start with the word _entry_ followed by a camel-case[6] description of its content and a publication date in format _yyyymmdd_. Entry points are the only files that contain dates in their names in order to facilitate identification and classification of a DTS that is a base for an instance document.

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[6] http://en.wikipedia.org/wiki/CamelCase

It is under consideration to use the modules manager[7] for the DCCA taxonomies in order to allow reporting entities to create customised entry schema files by selecting from the predefined modules.

4.3   Overview of current structure

Folders and files structure of the current content of the framework is presented on Fig 3.
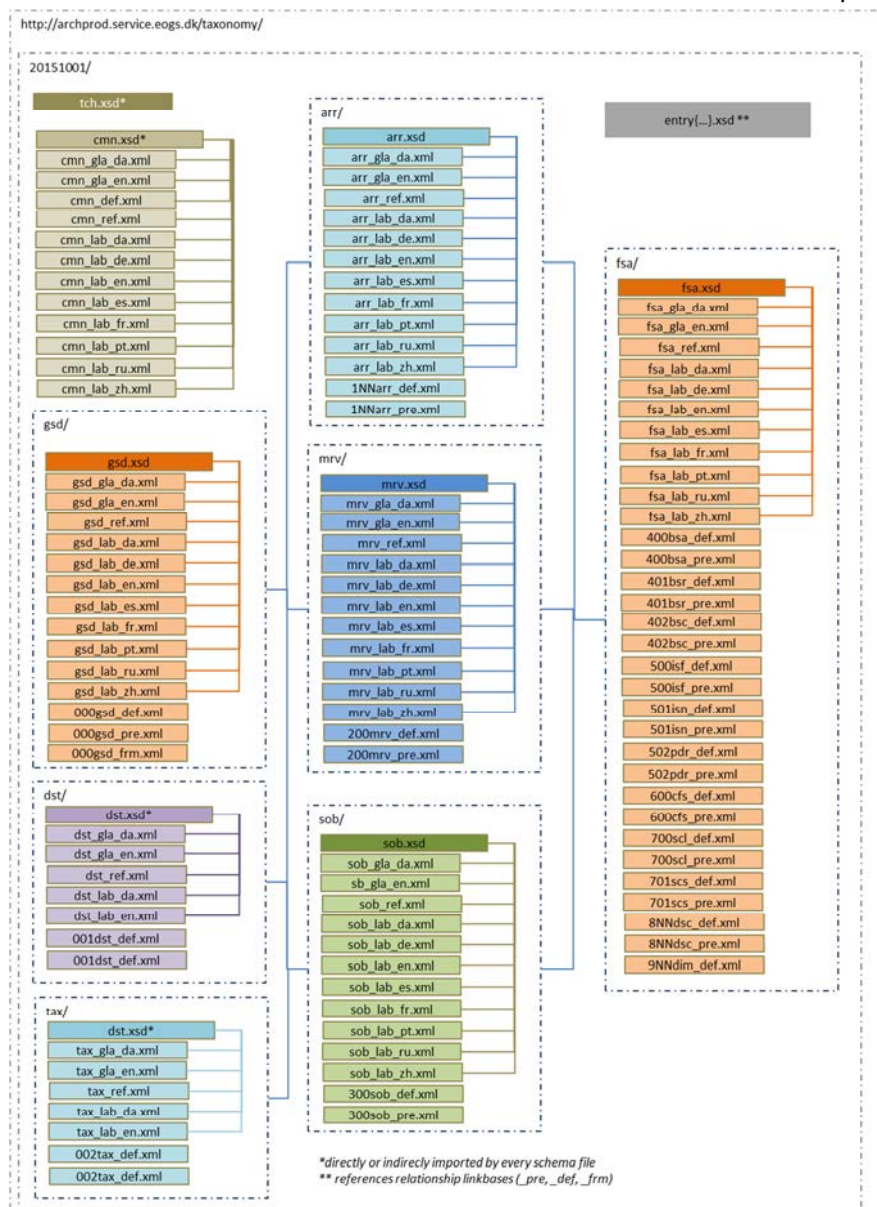
As presented on Fig 3 the current version of the taxonomy is placed under location *http://archprod.service.eogs.dk/taxonomy/20151001* (the last component expresses its publication date which is 1st of july 2014). It consists of eight components: *gsd, arr, mrv, sob, fsa, dst, tax* and *eogs*. The abbreviations and content of each of these components are explained in Section 3 of this

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[7] Taxonomy modules manager is an online (web based) application that allows users to select from the predefined modules and customize the entry schema to meet specific reporting requirements of an entity. Similar open source tool has been provided by the International Accounting Standards Committee (IASC) Foundation for the IFRS Taxonomy – see: http://xbrl-ifrs.org/ITMM/.

document. Each component contains a schema file (defining concepts and dimensional constructs), a linkbase files specifying labels for these concepts, a generic linkbase files defining generic labels for other artefacts (e.g. `roleType`s, enumerations for custom data types, etc.), a set of presentation and definition linkbase files containing relations and one or more formula linkbase files. Components based on legal regulations include linkbase files with references to the underlying legislation.

As described earlier in this document, components may reuse definition from other components. For example *tax*, *dst* and *eogs* reuse definitions from gsd while *mrv*, *tax* and *dst* reuse definitions from *fsa*.

The DCCA taxonomy is modularized in files which allows selecting these pieces of information set that are applicable for certain type of reporting requirements. Currently, it is possible to select from the following components:

1. General and submission data,
2. Auditor's report (on audited financial statements, review or assurance),
3. Management's review,
4. Statement of the board,
5. Balance sheet account form,
6. Balance sheet report form,
7. Balance sheet account form by Current and Longterm,
8. Income statement by function,
9. Income statement by nature,
10. Proposed distribution of results,
11. Cash flow statement,
12. Statement of changes in equity (long version),
13. Statement of changes in equity (short version),
14. Disclosures (on true and fair view, assets, liabilities other than provisions, provisions, equity, income statement, related parties, other),
15. Information for Statistics Denmark (Informationer til Danmarks Statestik),
16. Information for Danish Tax Authority (Informationer til Skat),
17. Information for Danish Commerce and Companies Agency other than Annual accounts.

The current version of the taxonomy allows selecting between the following entry point schema files:

- **entryDanishGAAPBalanceSheetAccountFormIncomeStatementByFunctionIncludingManagementsReviewStatisticsAndTax20151001.xsd:** Balance sheet account form + Income statement by function + General and submission data + Auditor's report (on audited financial statements, review or assurance) + Management's review + Statement of the board + Proposed distribution of results + Cash flow statement + Statement of changes in equity (long and short versions) + Disclosures (on true and fair view, accounting policies, assets, liabilities other than provisions, provisions, equity, income statement, related parties, other) + Information for Statistics Denmark + Information for Danish Tax Authority,

- **entryDanishGAAPBalanceSheetReportFormIncomeStatementByFunctionIncludingManagementsReviewStatisticsAndTax20151001.xsd:** Balance sheet report form + Income statement by function + General and submission data + Auditor's report (on audited financial statements, review or assurance) + Management's review + Statement of the board + Proposed distribution of results + Cash flow statement + Statement of changes in equity

(long and short versions) + Disclosures (on true and fair view, accounting policies, assets, liabilities other than provisions, provisions, equity, income statement, related parties, other) + Information for Statistics Denmark + Information for Danish Tax Authority,

- **entryDanishGAAPBalanceSheetReportFormIncomeStatementByNatureIncludingManagementsReviewStatisticsAndTax20151001.xsd:** Balance sheet report form + Income statement by nature + General and submission data + Auditor's report (on audited financial statements, review or assurance) + Management's review + Statement of the board + Proposed distribution of results + Cash flow statement + Statement of changes in equity (long and short versions) + Disclosures (on true and fair view, accounting policies, assets, liabilities other than provisions, provisions, equity, income statement, related parties, other) + Information for Statistics Denmark + Information for Danish Tax Authority,

- **entryDanishGAAPBalanceSheetAccountFormIncomeStatementByNatureIncludingManagementsReviewStatisticsAndTax20151001.xsd:** Balance sheet account form + Income statement by nature + General and submission data + Auditor's report (on audited financial statements, review or assurance) + Management's review + Statement of the board + Proposed distribution of results + Cash flow statement + Statement of changes in equity (long and short versions) + Disclosures (on true and fair view, accounting policies, assets, liabilities other than provisions, provisions, equity, income statement, related parties, other) + Information for Statistics Denmark + Information for Danish Tax Authority,

- **entryDanishGAAPBalanceSheetAccountByCurrentAndLongTermFormIncomeStatementByNatureIncludingManagementsReviewStatisticsAndTax20151001.xsd:** Balance sheet account form by current and long term + Income statement by nature + General and submission data + Auditor's report (on audited financial statements, review or assurance) + Management's review + Statement of the board + Proposed distribution of results + Cash flow statement + Statement of changes in equity (long and short versions) + Disclosures (on true and fair view, accounting policies, assets, liabilities other than provisions, provisions, equity, income statement, related parties, other) + Information for Statistics Denmark + Information for Danish Tax Authority,

- **entryDanishGAAPBalanceSheetAccountByCurrentAndLongTermFormIncomeStatementByFunctionIncludingManagementsReviewStatisticsAndTax20151001.xsd:** Balance sheet account form by current and long term + Income statement by function + General and submission data + Auditor's report (on audited financial statements, review or assurance) + Management's review + Statement of the board + Proposed distribution of results + Cash flow statement + Statement of changes in equity (long and short versions) + Disclosures (on true and fair view, accounting policies, assets, liabilities other than provisions, provisions, equity, income statement, related parties, other) + Information for Statistics Denmark + Information for Danish Tax Authority,

- **entryAll.xsd:** Balance sheet account form + Balance sheet report form + Balance sheet account form by current and long term + Income statement by function + Income statement by nature + General and submission data + Auditor's report (on audited financial statements, review or assurance) + Management's review + Statement of the board + Proposed distribution of results + Cash flow statement + Statement of changes in Equity (long and short versions) + Disclosures (on true and fair view, accounting policies, assets, liabilities other than provisions, provisions, equity, income statement, related parties, other) +

Information for Statistics Denmark + Information for Danish Tax Authority + Statement on revenue limit specified in the act on retail sales from stores etc + Statement regarding exemption not to present annual report.

NOTE: This entry point IS NOT meant for reporting – only for accession the taxonomy.

5   Data model

Prior to the development of a taxonomy, information requirements need to be identified specifying reportable concepts and relations between them. This is done in a form of data models.

The data models for the DCCA XBRL taxonomy framework have been created as a result of analysis of the underlying legal requirements (acts), common and best practices (currently submitted reports and model financial statements of accounting/audit firms) and previous version of the XBRL taxonomy developed by the DCCA for class-B companies (including also tax and statistics related concepts).

All this information has been represented in Microsoft Excel format as a set of spreadsheets (one for each component of a framework). Workbooks in these spreadsheets were designed in a fashion that allowed specifying general and financial characteristics of each concept, in particular the English and Danish labels, legal references, assumed period- and data type, purpose of each item and its placement in relation to other concepts. Additionally, the common items between components as well as items from one component reused in another component were identified and appropriately marked.

At the end, the reviewed data models were used as a basis for development of the XBRL taxonomy files (defining concepts and relations).

For further maintenance of the taxonomy all changes and extension of the information requirements are performed directly on XBRL files.

6   Definitions of concepts, dimensional constructs and other

Concepts, dimensional constructs and other artefacts are defined in XBRL schema files.

In particular, XBRL schema files contain definitions of:
- reportable concepts (items),
- non-reportable concepts (abstracts) used to support browsing of the taxonomy tree structures (relations),
- dimensional constructs (hypercube items, dimension items and domain members) that reflect breakdowns or special characteristics applicable for reportable concepts,
- `roleType`s used on definition extended links that combine relationships of a specific nature or application (e.g. balance sheet, disclosures on related parties, etc.).

6.1   Namespaces

Namespaces are used to differentiate between concepts defined by different regulations or applicable for different purposes. They are used in order to avoid name clashes and indicate the origin of each defined concept or construct.

Namespaces in this framework are constructed using the base part *http://xbrl.dcca.dk/* followed by a three letter identification of a component of a framework (as defined in Section 3 of this document). The list of currently used namespaces and prefixes (applied consistently across the framework) is defined in Table 1.

<div align="center">

Table 1

Recommended prefix	Namespace
arr	http://xbrl.dcca.dk/arr
cmn	http://xbrl.dcca.dk/cmn
dst	http://xbrl.dcca.dk/dst
fsa	http://xbrl.dcca.dk/fsa
gsd	http://xbrl.dcca.dk/gsd
mrv	http://xbrl.dcca.dk/mrv
sob	http://xbrl.dcca.dk/sob
tax	http://xbrl.dcca.dk/tax
eogs	http://xbrl.dcca.dk/eogs

</div>

6.2 Concepts and constructs

As described above, the DCCA XBRL taxonomies contain definitions of reportable concepts (items), non-reportable concepts (abstracts) and dimensional constructs (hypercubes, dimensions and domain members).

All concepts are defined in `item` substitution group or derived from it (`hypercubeItem` for hypercubes and `dimensionItem` for dimensions). All concepts are nillable (`@nillable="true"`) hence, they can be reported as nilled (`@xsi:nil="true"`). Although semantically unimportant, values of `@id` attribute (used for the purpose of creating links in XLink) are constructed basing on the pattern: *{recommended prefix}_{element name}*[8].

6.2.1 Reportable concepts

Definition of a reportable (non-abstract, i.e. `@abstract="false"`) concept must at minimum consist of:

-   unique local (within a namespace) name,
-   indication of a period type,
-   identification of a data type.

Names of reportable concepts correspond to the L3C (Label CamelCase Concatenation) representation of meaningful standard labels in English.

Value of `@periodType` attribute is either `instant` for these concepts that are reported at a point of time (as of specified date) or `duration` for concepts representing flows and changes (between specified dates or infinite). In cases where the period type is not obvious, the period type attribute is

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[8] As defined in http://www.xbrl.org/technical/guidance/FRTA-RECOMMENDATION-2005-04-25+corrected-errata-2006-03-20.htm (FRTA) rule 2.1.5. This pattern applies to items, abstracts, dimensional constructs, `roleType`s, data types and enumerations for custom data types.

set to `duration`[9]. This information must be taken into consideration in instance document when constructing contexts for facts based on reportable concepts. For textual concepts (i.e. concepts whose data type is `stringItemType`) start and end dates should reflect the boundary dates for which a report is created, for example, if the financial statement covers the third quarter of 2010 then the dates are 2010-07-01 and 2010-09-30 respectively. Similarly reasoning applies for concepts that represent dates. For instance in an annual report commencing June 2009 the context start and end dates for date concepts such as "Reporting period end date", "Reporting period start date" and "Date of approval of report" would be 2009-07-01 and 2010-06-30 respectively.

Data types define constraints on possible to report values. It is assumed that a taxonomy may apply any of the standard XBRL data types[10] as well as their extensions and restriction. Currently, the DCCA taxonomies make use of the following data types for reportable concepts:

- `stringItemType` (base XBRL type),
- `monetaryItemType` (base XBRL type),
- `decimalItemType` (base XBRL type),
- `dateItemType` (base XBRL type),
- `sharesItemType` (base XBRL type),
- `anyURIItemType` (base XBRL type),
- `booleanItemType` (base XBRL type),
- `gYearItemType` (base XBRL type),
- `integerItemType` (base XBRL type),
- `percentItemType` (XBRL International Registry type)[11],
- `cvrItemType` (custom DCCA item type; restriction of a `stringItemType` to a pattern of eight digits),
- `GLregnrItemType` (custom DCCA item type; restriction of a `stringItemType` to a pattern of up to nine digits),
- `cprItemType` (custom DCCA item type; restriction of a `stringItemType` to a pattern of nine digits),
- `pnrItemType` (custom DCCA item type; restriction of a `stringItemType` to a pattern of ten digits),
- `submittedReportItemType` (custom DCCA item type; restriction of a `tokenItemType` to a list values),
- `classOfEntityItemType` (custom DCCA item type; restriction of a `tokenItemType` to a list values),
- `coverageOfAuditorsReportItemType` (custom DCCA item type; restriction of a `tokenItemType` to a list values),
- `taxNominatorItemType` (custom DCCA item type; restriction of a `tokenItemType` to a list values),

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[9] This is for the reasons that it is always possible to indicate a moment in time using two identical dates (more precisely data and time) while it is not possible to describe a period of time using just a single date. The same approach was taken by the IFRS taxonomy (http://www.ifrs.org/NR/rdonlyres/38EAB597-A726-4A74-91EC-EEEF29BBE8A6/0/ITG201020100702.pdf page 31).

[10] As defined in http://www.xbrl.org/2003/xbrl-instance-2003-12-31.xsd

[11] As defined in http://www.xbrl.org/dtr/type/nonNumeric-2009-12-16.xsd

- reasonForExemptionFromAdditionalAccountingInformationItemType (custom DCCA item type; restriction of a tokenItemType to a list values),
- typeOfAuditorAssistanceItemType (custom DCCA item type; restriction of a tokenItemType to a list values),
- typeOfReportingEntityItemType (custom DCCA item type; restriction of a tokenItemType to a list values),
- countryIdentificationCodeItemType (custom DCCA item type based on ISO 3166 codes A2; restriction of a tokenItemType to a list values),
- ModifiedBasisForOpinionsItemType custom DCCA item type; restriction of a tokenItemType to a list values),
- ModifiedOpinionsItemType custom DCCA item type; restriction of a tokenItemType to a list values)
- participantNotPartOfRegisteredManagementType custom DCCA item type; restriction of a tokenItemType to a list values)

Enumerated values (restriction of tokenItemType) correspond to the L3C (Label CamelCase Concatenation) representation of meaningful standard generic English label defined in a generic label linkbase file referenced from a component schema file (this generic label linkbase file defines also generic labels in Danish for each enumeration).

Fragment of the custom enumerated data type typeOfAuditorAssistanceItemType declaration defined in *tax.xsd* schema file is presented on Code example 1.

Code example 1

```
<xsd:complexType name="typeOfAuditorAssistanceItemType" id="tax_typeOfAuditorAssistanceItemType">
  <xsd:simpleContent>
    <xsd:restriction base="xbrli:tokenItemType">
      <xsd:enumeration value="stateauthorisedPublicAuditor" id="tax_stateauthorisedPublicAuditor"/>
      <xsd:enumeration value="registeredPublicAuditor" id="tax_registeredPublicAuditor"/>
      <xsd:enumeration value="otherAuditor" id="tax_otherAuditor"/>
      <xsd:enumeration value="noAuditor" id="tax_noAuditor"/>
      <xsd:attributeGroup ref="xbrli:nonNumericItemAttrs"/>
    </xsd:restriction>
  </xsd:simpleContent>
</xsd:complexType>
```

Declarations of Danish generic labels defined in *tax_gla-da.xml* corresponding to the first enumeration of this data are presented on Code example 2.

Code example 2

```
<link:loc xlink:type="locator" xlink:href="tax.xsd#tax_stateauthorisedPublicAuditor"
    xlink:label="enumeration_6"/>
<label:label xlink:type="resource" xlink:label="label_14"
    xlink:role="http://www.xbrl.org/2008/role/label"
    xml:lang="da">Statssutoriseret revisor</label:label>
<gen:arc xlink:type="arc" xlink:arcrole="http://xbrl.org/arcrole/2008/element-label"
    xlink:from="enumeration_6" xlink:to="label_14" order="10.0"/>
```

The DCCA taxonomy uses the optional `@balance` attribute on all monetary items. Negated labels are in some cases build into the ondinary label in (), e.g. "Gains (losses) from current value….".

The taxonomy defines in total 1217 reportable concepts (34 in CMN, 56 in GSD, 75 in ARR, 54 in MRV, 24 in SOB, 1074 in FSA, 57 in DST, 15 in EOGS and 72 in TAX) however the number of possible to report records is much higher (5000+) as a result of application of XBRL dimensions to model the information requirements and request for previous period information (beginning balance).

6.2.2   Abstract constructs

All not-reportable concepts have `@abstract="true"`.

Names of abstract constructs correspond to the L3C (Label CamelCase Concatenation) representation of meaningful standard labels in English followed by the word `Abstract` (e.g. `@name="IntangibleAssetsAbstract"`) in order not to occupy meaningful names that may be otherwise assigned to reportable concepts and differentiate from other constructs.

Although it is semantically unimportant, all abstracts are `@periodType="duration"` and `@dataType="stringItemType"`.

6.2.3   Dimensional constructs

Definition of dimensional constructs follows the rules of the XBRL Dimensions 1.0 specification and the recent recommendations and deliverables of the XBRL International Working Group on Interoperable Taxonomy Architecture.

According to the above, all dimensional constructs are abstracts (`@abstract="true"`). Moreover, hypercubes are defined in `hypercubeItem` and dimensions in `dimensionItem` substitutions groups[12], data type of domain members is `domainItemType`[13], and, although semantically unimportant, all dimensional constructs are `@periodType="duration"` and hypercubes and dimensions are `@dataType="stringItemType"`.

Names of dimensional constructs correspond to the L3C (Label CamelCase Concatenation) representation of meaningful standard labels in English followed by one of the following words:
-   `Hypercube` for hypercube items (e.g. `@name="DetailsOnTreasurySharesHoldHypercube"`),
-   `Dimension` for dimension items (e.g. `@name="ManagementCategoryDimension"`),
-   `Member` for domain member (e.g. `@name="PlantAndMachineryMember"`),

in order not to occupy meaningful names that may be otherwise assigned to reportable concepts and differentiate from other constructs.

As a result of application of certain modelling techniques which rationales are described later in this document, the DCCA taxonomy defines a number of typed dimensions and hence also typed domains (see Section 10.3 for details). Definition of a typed domain must consist of a `@name`, `@dataType` and `@id` (semantically unimportant but required in order to reference from a declaration of a typed dimensions). Names of typed domains reflect the camel-case description of their content followed by

---

[12] As defined in http://www.xbrl.org/2005/xbrldt-2005.xsd.
[13] As defined in http://www.xbrl.org/dtr/type/nonNumeric-2009-12-16.xsd

the component `Identifier` (e.g. `memberOfBoardIdentifier`). `@dataType` of typed domains is always `string` (XML Schema data type).

6.3 Roles used on extended links

XBRL schema files contain declarations of `roleType`s used on extended links. They distinguish and name the sets of relations defined in linkbase files.

Declaration of a `roleType` consists of a `@roleURI` attribute (which is a unique identification of a role in a form a Unified Resource Identifier[14] that allows to create networks of relations spread across many files), an `@id` attribute (used for linking purposes with no semantic meaning) and subelements: `definition` (containing human readable description in a single language) and `usedOn` specifying the kinds of extended links (or resources) where the declared `roleType` can be applied.

In general, `roleType`s are created for two purposes:
- due to business reasons - in order to support browsing of a taxonomy by separating information sets (concepts and relations between them) that represent certain parts of reporting requirements (e.g. all concepts from *Balances sheet account form* and relations between them),
- due to technical reasons:
  - as a result of limitations of design of XBRL relations in form of tree structures (graphs),
  - as a consequence of rules defined in specifications (e.g. disallowing undirected cycles for certain types of relations, algorithms for inheritance of dimensional information ancestors, etc.).

Due to the reasons defined above all `roleType`s defined in the DCCA taxonomy contain a number component. It consist of a three-digit identifier of an information set from business perspective, followed by a dot and followed by a two-digit identifier of a subset of relations due to technical limitations/rules for a given information set (e.g. *802.04*). This number component is included on each `roleType` as part of a value of `@roleURI, definition` element and generic labels for `roleType`s. This component serves also the ordering purposes in the absence of an order identifier on extended links. Its use and construction are explained later in this section.

In terms of structuring of relationships in the definition linkbase, the DCCA taxonomy distinguishes between the following four types of `roleType`s, which are used to define:
- a) **general information sets** containing items linked to commonly applied dimensional information (e.g. distinction between solo and consolidated data),
- b) **detailed information sets** – items for which they are detailing hypercubes (more detailed breakdowns defined using XBRL dimensions),
- c) **detailing hypercubes** identifying dimensions and their members (sub-domains) relevant for each hypercube,
- d) **general domains of dimensions**.

---

[14] http://en.wikipedia.org/wiki/Uniform_Resource_Identifier

Description of a type of information set (regarding which group it applies to) is expressed by the pattern applied for the number component and construction of a value of `@roleURI` attribute, `definition` element and generic labels for `roleType`s.

Number component for information sets defined in groups a) to c) specified above contains a three-digit identifier distinguishing the component of the framework:
- *000* for GSD,
- *001* for DST,
- *002* for TAX,
- *1{XX}* for ARR,
- *200* for MRV,
- *300* for SOB,
- *40{X}, 50{X}, 600, 700, 80{X}* for FSA.
- *1{XXX} for EOGS*

Three digit identifier with values *9{XX}* is reserved for general domains of dimensions (group d).

In order to facilitate browsing and discovery of reportable information defined by the taxonomy in the definition linkbase (see Section 7 for details) the two-digit identifier of a subset of relations for `roleType`s specifying general and detailed information sets (items linked to dimensional information) is always *00.* For detailed hypercubes and general domains of dimensions this identifier is different than *00* (e.g. *01*, *02*, …).

As explained above, value of `definition` subelements consist of a number component (in square brackets) followed by the human description (in English) of the content of the extended link for the purpose of which the `roleType` is defined (e.g. *[802.00] Disclosure of assets*). If a `roleType` is used to express detailed information set (from group b) it contains component – *Details* at the end of `definition` (e.g. *[802.00] Disclosure of assets – Details*). For detailing hypercubes `definition` begins with a word *Hypercube* followed by identification of general information set (in square brackets) followed by dash and the description of the content of the details (e.g*. [802.02] Hypercube [Disclosure of assets] - Details on reconciliation of changes in intangible assets*).

Construction of `@roleURI`s begin with the following base URI: *http://xbrl.dcca.dk/role* followed by the number component and followed by the camel-case description (in English) of the content of the extended link for the purpose of which the `roleType` is defined (each component is separated with a slash, e.g. *http://xbrl.dcca.dk/role/802.00/DisclosureOfAssets*). If a `roleType` is used to express detailed information set (from the group b) it contains component */Details* at the end of `@roleURI` (e.g. *http://xbrl.dcca.dk/role/802.00/DisclosureOfAssets/Details*). For detailing hypercubes (group c) `@roleURI` begins with a base URI and the number component followed by */Hypercube* followed by identification of general information set (camel-case description in English) followed by the camel-case description of the content of the details (each component separated with a slash e.g. *http://xbrl.dcca.dk/role/802.02/Hypercube/DisclosureOfAssets/DetailsOnReconciliationOfChangesInIntangibleAssets*).

roleTypes defined by in the DCCA taxonomy[15] can be used on presentationLink and definitionLink, however in some case they can also indicate labelLink that contains specific labels applied for an information set (for example TAX specific labels of FSA and CMN concepts, see Section 8 for details) or generic link for formula linkbase.

Example of a custom roleType declaration defined in *fsa.xsd* is presented on Code example 3.

Code example 3

```
<link:roleType roleURI="http://xbrl.dcca.dk/role/400.00/BalanceSheetAccountForm"
    id="fsa_RoleBalanceSheetAccountForm">
    <link:definition>[400.00] Balance sheet [account form]</link:definition>
    <link:usedOn>link:presentationLink</link:usedOn>
    <link:usedOn>link:definitionLink</link:usedOn>
</link:roleType>
```

Code example 4 shows a fragment of code of *fsa_gla-da.xml* generic linkbase containing generic labels in Danish declared for the roleType presented on Code example 3.

Code example 4

```
<link:loc xlink:type="locator" xlink:href="fsa.xsd#fsa_RoleBalanceSheetAccountForm"
    xlink:label="roleType"/>
<label:label xlink:type="resource" xlink:label="label_2"
    xlink:role="http://www.xbrl.org/2008/role/label"
    xml:lang="da">[400.00] Balance [kontoform]</label:label>
<gen:arc xlink:type="arc" xlink:arcrole="http://xbrl.org/arcrole/2008/element-label"
    xlink:from="roleType" xlink:to="label_2" order="10.0"/>
```

Description of the content and explanation of relations between the different types of extended links is explained in the next section of this document.

7   Sets of relations

The DCCA taxonomy contains relations in the presentation and definition linkbases. Relations in the presentation linkbase are constructed as defined in the XBRL 2.1 Specification. Definition linkbase relations are constructed using arcs with arcroles defined in XBRL Dimensions 1.0[16].
Relations provide semantic information on:
-   placement of concepts (items with dimensional information) in particular information sets (such as *Balance sheet account form*, *Disclosure of assets*, etc.),
-   application of dimensional information for items,
-   hierarchical structures between items and members of dimensions.

Due to a number of reasons indicated in the previous section of this document, relations need to be split in sets and defined in separate extended link roles.

---

[15] Apart from those defined in the schema file for technical constructs, i.e. *tch.xsd*.
[16] http://www.xbrl.org/Specification/XDT-REC-2006-09-18+Corrected-Errata-2009-09-07.htm#_Toc243301749

In order to facilitate browsing and discovery of the content of the DCCA taxonomy, relations have been split in sets according to a certain logic.

In both, presentation and definition linkbases the reportable information can be found in extended links which `definition`, `@roleURI` and generic labels values containing *00* as a two-digit identifier of a subset of relations. Discovery starts from a general information set as described in the previous section (e.g. from extended link with `@roleURI="http://xbrl.dcca.dk/role/805.00/DisclosureOfEquity"`).

Additionally, in the definition linkbase, the detailing information it is indicated on definition arc by the `@targetRole` attribute pointing to an extended link role containing the details (Code example 5).

<div align="center">Code example 5</div>

```
<link:definitionArc
    xlink:type="arc" xlink:arcrole="http://xbrl.org/int/dim/arcrole/domain-member"
    xlink:from="InformationOnClassesOfIssuedShares"
    xlink:to="DetailsOnClassesOfIssuedSharesAbstract" order="10.0"
    xbrldt:targetRole="http://xbrl.dcca.dk/role/805.00/DisclosureOfEquity/Details"/>
```

Targeted extended link contains detailed information sets, each starting from an abstract item to which a hypercube is linked. Content of each hypercube is defined in a separate extended link which role is indicated by the `@targetRole` attribute value on a definition arc linking an abstract item to a hypercube (Code example 6).

<div align="center">Code example 6</div>

```
<link:definitionArc
    xlink:type="arc" xlink:arcrole="http://xbrl.org/int/dim/arcrole/all"
    xlink:from="DetailsOnClassesOfIssuedSharesAbstract"
    xlink:to="DetailsOnClassesOfIssuedSharesHypercube"
    use="optional" order="10.0" xbrldt:contextElement="scenario" xbrldt:closed="true"
    xbrldt:targetRole="http://xbrl.dcca.dk/role/805.01/Hypercube/DisclosureOfEquity/DetailsOnClassesOfIssuedShares"/>
```

Targeted extended link which two-digit identifier of a subset of relations is different than *00* (e.g. *805.01* as on Code example 6) contains identification of applicable dimensions which members are either explicitly identified within this extended link role or further discovered using the `@targetRole` attribute mechanism (pointing to general domains of dimensions with number component starting with *9*) as presented on Code example 7.

<div align="center">Code example 7</div>

```
<link:definitionArc
    xlink:type="arc" xlink:arcrole="http://xbrl.org/int/dim/arcrole/hypercube-dimension"
    xlink:from="DetailsOnRevaluatedOrWrittenDownLongtermInvestmentsNotContinuouslyAdjustedToFairValueHypercube"
    xlink:to="ClassesOfInvestmentsDimension" use="optional" order="10.0"
    xbrldt:targetRole="http://xbrl.dcca.dk/role/906.01/DimensionClassesOfInvestments"/>
```

The overview of the DCCA taxonomy browsing and discovery based on the definition linkbase taking into account `@targetRole` attribute mechanism is presented on Fig 4.

Fig 4
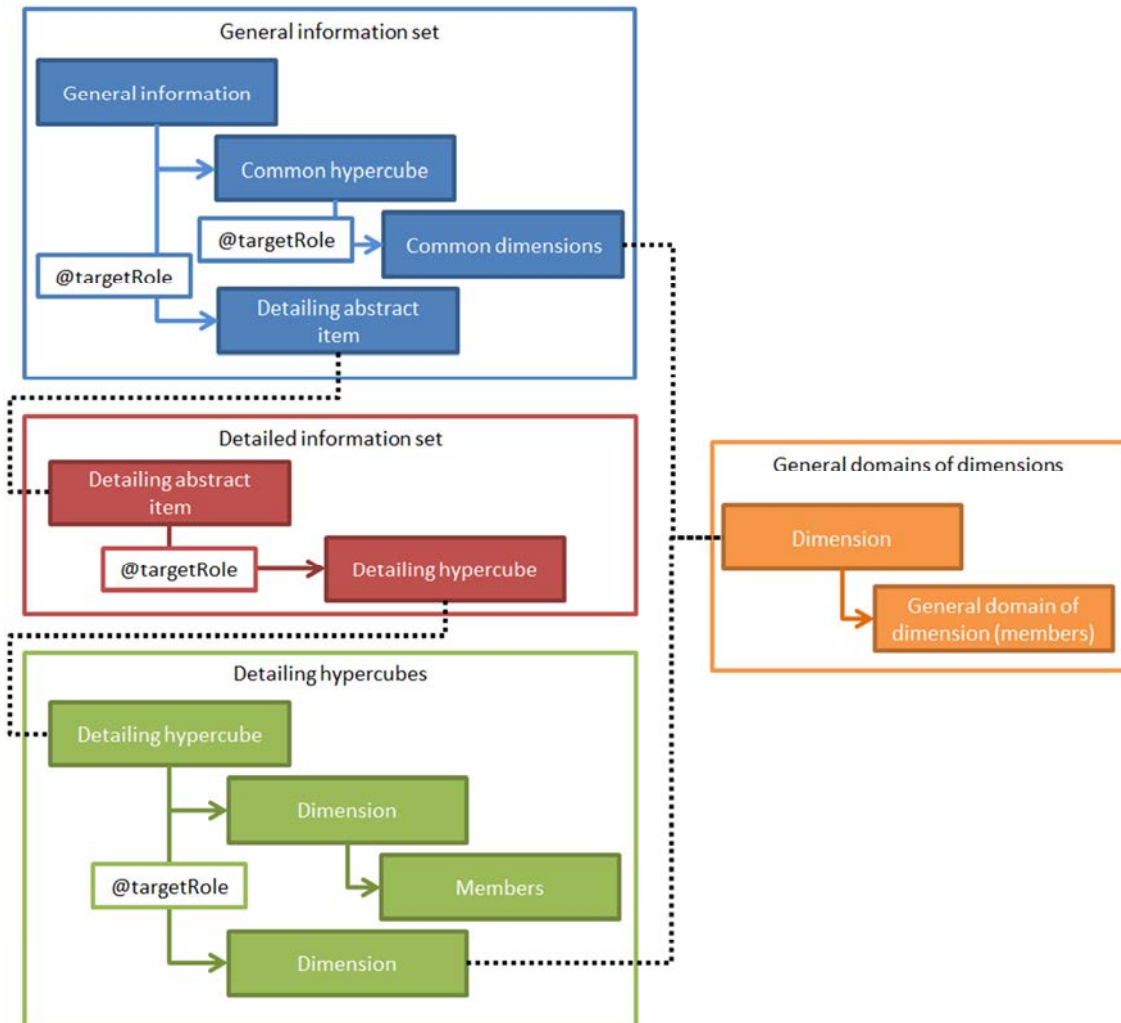
8 Labels

The DCCA taxonomy contains Danish and English labels for each concept. This enables browsing the taxonomy content in these two languages. Additionally, in contains also generic labels for other constructs such as `roleType`s, enumerations of data types, etc. (see Code example 2 and Code example 4).

Several concepts contain also labels specific for certain reporting requirements. For example, there is a number of the GSD and FRS concepts reused in the TAX component. Due to the fact, that reporting requirements for tax purposes should resemble the names used on the tax form, all the concepts used in the TAX component have labels defined in standard extended link role as well as the extended link role for TAX (`@roleURI="http://xbrl.dcca.dk/role/002.00/InformationForDanishTaxAuthority"`). They are defined, depend on language used, in *tax_lab-en.xml* or *tax_lab-da.xml* (for tax specific concepts). An example is presented on Code example 8.

<div align="center">Code example 8</div>

```
<link:labelLink xlink:type="extended"
    xlink:role="http://xbrl.dcca.dk/role/002.00/InformationForDanishTaxAuthority">
<link:loc xlink:type="locator" xlink:href="../fsa/fsa.xsd#fsa_Revenue" xlink:label="Revenue"/>
<link:label xlink:type="resource" xlink:label="label_Revenue_2"
    xlink:role="http://www.xbrl.org/2003/role/label"
    xml:lang="da" id="label_Revenue_2">Nettoomsætning</link:label>
<link:labelArc xlink:type="arc" xlink:arcrole="http://www.xbrl.org/2003/arcrole/concept-label"
    xlink:from="Revenue" xlink:to="label_Revenue_2" order="10.0"/>
(...)
</link:labelLink>
```

This should allow viewing the TAX component using the specific labels.

Apart from the standard labels (which role is `http://www.xbrl.org/2003/role/label`) the DCCA taxonomy includes also period start (label role `http://www.xbrl.org/2003/role/periodStartLabel`) and period end (label role `http://www.xbrl.org/2003/role/periodEndLabel`[17]) labels for certain concepts. An example of these time context labels defined using period start and period end label roles for the concept "Cash and cash equivalents" in Danish is presented on Code example 9.

<div align="center">Code example 9</div>

```
<link:loc xlink:type="locator" xlink:href="fsa.xsd#fsa_CashAndCashEquivalents"
    xlink:label="CashAndCashEquivalents"/>
<link:label xlink:type="resource" xlink:label="label_CashAndCashEquivalents_4"
    xlink:role="http://www.xbrl.org/2003/role/label"
    xml:lang="da" id="label_CashAndCashEquivalents_4">Likvide beholdninger</link:label>
<link:labelArc xlink:type="arc" xlink:arcrole="http://www.xbrl.org/2003/arcrole/concept-label"
    xlink:from="CashAndCashEquivalents" xlink:to="label_CashAndCashEquivalents_4" order="10.0"/>
<link:label xlink:type="resource" xlink:label="label_CashAndCashEquivalents_5"
    xlink:role="http://www.xbrl.org/2003/role/periodStartLabel" xml:lang="da"
    id="label_CashAndCashEquivalents_5">Likvide beholdninger, primo</link:label>
<link:labelArc xlink:type="arc" xlink:arcrole="http://www.xbrl.org/2003/arcrole/concept-label"
    xlink:from="CashAndCashEquivalents" xlink:to="label_CashAndCashEquivalents_5" order="10.0"/>
<link:label xlink:type="resource" xlink:label="label_CashAndCashEquivalents_6"
    xlink:role="http://www.xbrl.org/2003/role/periodEndLabel"
    xml:lang="da" id="label_CashAndCashEquivalents_6">Likvide beholdninger, ultimo</link:label>
<link:labelArc xlink:type="arc" xlink:arcrole="http://www.xbrl.org/2003/arcrole/concept-label"
    xlink:from="CashAndCashEquivalents" xlink:to="label_CashAndCashEquivalents_6" order="10.0"/>
```

These label roles are later referenced from arcs in the presentation linkbase using a standard `@preferredLabel` attribute (as defined in the XBRL 2.1 Specification) and in the definition linkbase using `@preferredLabel` attribute defined in *tch.xsd*[18] (Code example 10).

---

[17] http://www.xbrl.org/Specification/XBRL-RECOMMENDATION-2003-12-31+Corrected-Errata-2008-07-02.htm#_5.2.2.2

[18] This is similar solution to the `@preferredLabel` attribute defined for the presentation linkbase arcs (http://www.xbrl.org/Specification/XBRL-RECOMMENDATION-2003-12-31+Corrected-Errata-2008-07-02.htm#_5.2.4.2).

Code example 10

```
<xsd:attribute name="preferredLabel">
  <xsd:simpleType>
    <xsd:restriction base="xsd:anyURI">
      <xsd:minLength value="1"/>
    </xsd:restriction>
  </xsd:simpleType>
</xsd:attribute>
```

In the future this custom solution will be replaced by the generic preferred label attribute defined as part of the XBRL standard functionality[19]. An example of use of the custom `preferredLabel` attribute in the definition linkbase is presented on Code example 11.

Code example 11

```
<link:loc xlink:type="locator" xlink:href="fsa.xsd#fsa_CashFlowsStatement"
    xlink:label="CashFlowsStatement"/>
<link:loc xlink:type="locator" xlink:href="fsa.xsd#fsa_CashAndCashEquivalents"
    xlink:label="CashAndCashEquivalents"/>
<link:definitionArc xlink:type="arc" xlink:arcrole="http://xbrl.org/int/dim/arcrole/domain-member"
    xlink:from="CashFlowsStatement" xlink:to="CashAndCashEquivalents" order="60.0"
    tch:preferredLabel="http://www.xbrl.org/2003/role/periodStartLabel"/>
<link:loc xlink:type="locator" xlink:href="fsa.xsd#fsa_CashAndCashEquivalents"
    xlink:label="CashAndCashEquivalents_2"/>
<link:definitionArc xlink:type="arc" xlink:arcrole="http://xbrl.org/int/dim/arcrole/domain-member"
    xlink:from="CashFlowsStatement" xlink:to="CashAndCashEquivalents_2" order="70.0"
    tch:preferredLabel="http://www.xbrl.org/2003/role/periodEndLabel"/>
```

Information about time context labels shall be consumed by XBRL applications for the benefit of user interface (similarly to how this is done for the standard mechanism used in the presentation linkbase and defined in the XBRL 2.1 specification[20]). For instance, information presented on Code example 11 should result in display of time context labels for the concept "Cash and cash equivalence" as defined in Code example 9.

9   References

In order to facilitate understanding of meaning and content of concepts defined, the DCCA taxonomy provides (where possible) references to legal regulations. These references are constructed using parts defined by the XBRL International (Appendix B of the Financial Reporting Taxonomy Architecture with errata corrections to 2006-03-20[21]). The full list of parts is presented in Table 2.

Table 2

Part	Description
Appendix	Refers to the name of an Appendix, which could be a number or text.
Article	Article refers to a statutory article in legal material.
Chapter	For a publication that uses chapters, this part should be used to capture this information. Chapters are not necessarily numbered.

---

[19] http://xbrl.org/Specification/genericPreferredLabel/PR-2012-01-25/genericPreferredLabel-PR-2012-01-25.html

[20] http://www.xbrl.org/Specification/XBRL-RECOMMENDATION-2003-12-31+Corrected-Errata-2008-07-02.htm#_5.2.4.2

[21] http://www.xbrl.org/technical/guidance/FRTA-RECOMMENDATION-2005-04-25+corrected-errata-2006-03-20.htm#_Toc131223668

Part	Description
Clause	Sub component of a sub paragraph.
Example	Example captures examples used in reference documentation.
Exhibit	Exhibit refers to exhibits in reference documentation.
Footnote	Footnote is used to reference footnotes in reference information.
IssueDate	The issue date of the specific reference. The format is CCYY-MM-DD.
Name	Name refers to the specific publication. For example, "Statement of Financial Standards", "Statement of Position" or "IFRS". It does not include the number.
Note	Notes can contain reference material; use this element when the note is published as a standalone document.
Number	Number is used to record the actual number of the specific publication. For example, the number for FAS 133 would be 133.
Page	Page number of the reference material.
Paragraph	Paragraph is used to refer to specific paragraphs in a document.
Publisher	Publisher of the reference material, such as SEC, FASB, or AICPA.
Section	Section is used to capture information typically captured in sections of legislation or reference documents.
Sentence	In some reference material individual sentences can be referred to, and this element allows them to be referenced.
Subclause	Subcomponent of a clause in a paragraph.
Subparagraph	Subparagraph of a paragraph.
Subsection	Subsection is a subsection of the section part.
URI	Full URI of the reference such as "http://www.fasb.org/fas133".
URIDate	Date that the URI was valid, in CCYY-MM-DD format.

Currently, the DCCA taxonomy makes use of the following parts:

- **Publisher** – name of a publishing authority of a legal regulation or other requirement that resulted in creation of a concept in question, e.g. *Økonomi- og Erhvervsministeriet* (the Danish Ministry of Economic and Business Affairs), *Erhvervsstyrelsen* (the Danish Business Authority), *DST*, *Skat*, etc.
- **Name** – name of a legal regulation, e.g. *Årsregnskabsloven* (the Annual Accounts Act), *Erklæringsbekendtgørelsen* (the Executive Order on Approved Auditors' Reports), *Bekendtgørelse om dokumentation af omsætningensstørrelse m.v.*, or identification, that the concept was created based on common/best practices: *Praksis*,
- **Paragraph**, **Subparagraph** and **Clause** – reflect the structure of legal regulations,
- **Note** and **Appendix**.

Code example 1 presents an example of a reference to a text of a legal regulation.

Code example 12


```
§ 53. Der skal redegøres for de indregningsmetoder og målegrundlag (værdiansættelsen), der er anvendt på posterne i
       balance, resultatopgørelse, noter og ledelsesberetning. Endvidere skal det fremgå, hvilken regnskabsklasse virksomheden
       aflægger årsrapport efter. Anføres beløbene i en anden valuta end danske kroner eller euro, jf. § 16, 2. pkt., skal der gives
       oplysning om kursen på den anførte valuta pr. balancedagen i forhold til danske kroner og den tilsvarende valutakurs pr. det
       foregående regnskabsårs balancedag.
       Stk. 2. Af redegørelsen skal for de relevante poster i det mindste fremgå:
       1) Indregningsmetoderne og målegrundlag for aktiver og forpligtelser, herunder om, hvorvidt renter indregnes i kostprisen,
```

```xml
<link:reference xlink:type="resource"
    xlink:label="reference_DescriptionOfMethodsOfTranslationOfForeignCurrencies"
    xlink:role="http://www.xbrl.org/2003/role/reference">
  <ref:Publisher>Økonomi- og Erhvervsministeriet</ref:Publisher>
  <ref:Name>Årsregnskabsloven</ref:Name>
  <ref:Paragraph>53</ref:Paragraph>
  <ref:Subparagraph>2</ref:Subparagraph>
  <ref:Clause>2</ref:Clause>
</link:reference>
```

```
       jf. § 32.
       2) Metoderne for omregning fra fremmede valutaer til den valgte monetære enhed.
       3) Metoderne efter § 50 for sikring af værdien af aktiver og forpligtelser samt metoderne for sikring af aktiver og
          forpligtelser, som virksomheden forventer at modtage henholdsvis påtage sig.
       4) Hvis forslag til udbytte indregnes som forpligtelse efter § 48.
       5) Andelsvirksomheders behandling af efterbetaling fra og tilbagebetaling til andelshavere.
```

Code example 13 presents a reference to a schedule/scheme in an annex to a regal regulation.

Code example 13

Bilag 2

Skemaer for balancer og resultatopgørelser

1. Skema for balance i kontoform (regnskabsklasse B, C og D)

AKTIVER

ANLÆGSAKTIVER

```xml
<link:reference xlink:type="resource"
    xlink:label="reference_Goodwill"
    xlink:role="http://www.xbrl.org/2003/role/reference">
  <ref:Publisher>Økonomi- og Erhvervsministeriet</ref:Publisher>
  <ref:Name>Årsregnskabsloven</ref:Name>
  <ref:Appendix>Bilag 2, Skema 1</ref:Appendix>
</link:reference>
```

I. Immaterielle anlægsaktiver

1. Færdiggjorte udviklingsprojekter, herunder koncessioner, patenter, varemærker og
   lignende rettigheder, der stammer fra udviklingsprojekter
2. Erhvervede koncessioner, patenter, licenser, varemærker samt lignende rettigheder
3. Goodwill
4. Udviklingsprojekter under udførelse og forudbetalinger for immaterielle anlægsaktiver

Code example 14 presents a reference indicating that an item was created in order to reflect a common/best practice (i.e. not defined in any regulation but frequently used in reports).

Code example 14

```xml
<link:reference xlink:type="resource"
    xlink:label="reference_DescriptionOfAccountingPoliciesRelatedToDerivativeFinancialInstruments"
    xlink:role="http://www.xbrl.org/2003/role/reference">
  <ref:Publisher>Erhvervs- og Selskabsstyrelsen</ref:Publisher>
  <ref:Name>Praksis</ref:Name>
</link:reference>
```

Currently all references are defined in a standard role
(`http://www.xbrl.org/2003/role/reference`). XBRL standard provides a number of roles that can
be used in order to more precisely indicate the type of reference expressed by parts (e.g. related to
measurement, definition, etc.)[22]. It is planned for the next releases of the DCCA taxonomy to further
expand the list of references including also identification of their types.

10   Application of dimensions

The DCCA taxonomy makes an extensive use of XBRL dimensions[23]. Currently it defines 17 explicit
dimensions and 21 typed dimensions (whose values are defined by reporting entities in instance
documents).

The designated container for dimensional information in instance documents is `scenario` element as
indicated on definition arcs with `http://xbrl.org/int/dim/arcrole/all` arcrole (see Code
example 6). The taxonomy does not contain any arc with
`http://xbrl.org/int/dim/arcrole/notAll`. Every hypercube is closed (`@closed="true"`).

10.1   Default members of dimensions

The taxonomy defines a default member for each explicit dimension. This is important information
due to the fact that default members must not be declared in instance documents[24]. In order to
facilitate discovery of default members they are all defined in a single extended link with `@roleURI`
`http://xbrl.dcca.dk/role/900.01/DimensionDefaultMembers`.

10.2   Solo/consolidated

The DCCA taxonomy is applicable for consolidated reports (which include figures and other
information for both, a group and a parent) and solo reports containing data of a single entity. This
distinction has been modelled using XBRL dimension *Consolidated/Solo* that is defined in CMN
(common) component of the framework and is applied to every reportable concept (in every
hypercube). There are no distinct files, extended link roles, whatsoever indicating which information
is reportable only on solo and which on consolidated basis. Moreover the taxonomy may define
superfluous information in this area. Therefore it is responsibility of reporting entities to provide
valid information in this regard in instance documents. A single XBRL instance document can contain
solo as well as consolidated data.

10.3   Typed dimensions

As explained in section 12 of this document, typed dimensions are used for allowing disclosing
certain information of a predefined type that needs to be further characterized in order to identify its
exact meaning.

In particular, they are used to identify:
- members of executive and supervisory boards, and liquidator

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[22] http://www.xbrl.org/Specification/XBRL-RECOMMENDATION-2003-12-31+Corrected-Errata-2008-07-02.htm#_5.2.3.2

[23] http://www.xbrl.org/Specification/XDT-REC-2006-09-18+Corrected-Errata-2009-09-07.htm

[24] http://www.xbrl.org/Specification/XDT-REC-2006-09-18+Corrected-Errata-2009-09-07.htm#_Toc243301768

- auditors performing audit, review or assurance engagement, performers of internal audit and other of statements
- other statements
- shareholders,
- related entities,
- classes of shares,
- key figures or financial ratios,
- other components of cash flows,
- other operating income,
- operating segments and geographical markets,
- transactions,
- loans raised against debt instruments or claims.

As described in section 6.2.3, typed domains of all typed dimension are always simple constructs which data type is `string`. In an instance document typed domain must be instantiated as a unique "key" value linking facts that have something in common.

For example, reporting entities are required to disclose information on revenues for operating segments and geographical markets. Therefore, the taxonomy defines three primary items: *Revenue*, *Name of operating segment* and *Name of geographical segment* that are linked to a hypercube containing *Identification of operating segment* and *Identification of geographical market* typed dimensions. In case of *Identification of operating segment* dimension an instance document should contain a unique typed domain value for a given operating segment. Similarly, for *Identification of geographical market* dimension a report should provide a unique identification of a geographical market. The unique identification should be bound to a given operating segment or geographical market in the instance document. For example, assuming that operating segments of an reporting entity are sales of *Ships* and *Boats*, for each sector there should be one unique identifying value for the typed domain of *Identification of operating segment* dimension. This alpha-numeric value could be a code, a word, etc.

For instance, as presented in Table 3, fact for *Name of reporting segment: Både* (in Danish)/*Boats* (in English) should be linked in an instance document always (and only) to a typed domain of *Identification of operating segment* dimension which value is $x2$ (irrespective of the values of other typed/explicit dimensions in a given container of dimensional information in an instance document).

Table 3

Operating segment identifier	Geographical market identifier	Revenue	Name of reporting segment		Name of geographical market	
		(in millions)	Danish	English	Danish	English
x1	x1	150 780 DKK	Skibe	Ships	Danmark	Denmark
x1	x2	22 100 DKK	Skibe	Ships	Resten af EU	Rest of EU
x1	x3	123 444 DKK	Skibe	Ships	Andre	Other
x2	x1	12 033 DKK	Både	Boats	Danmark	Denmark
x2	x2	3 005 DKK	Både	Boats	Resten af EU	Rest of EU
x2	x3	41 000 DKK	Både	Boats	Andre	Other

Code example 15 resents a typed dimension declaration in instance document in code.

Code example 15

```xml
<xbrli:context id="d_x1_x2">
  <xbrli:entity>
    <xbrli:identifier scheme="http://scheme">entityIdentification</xbrli:identifier>
  </xbrli:entity>
  <xbrli:period>
    <xbrli:startDate>2009-01-01</xbrli:startDate>
    <xbrli:endDate>2009-12-31</xbrli:endDate>
  </xbrli:period>
  <xbrli:scenario>
    <xbrldi:typedMember dimension="fsa:IdentificationOfGeographicalMarketDimension">
      <fsa:geographicalMarketIdentifier>x1</fsa:geographicalMarketIdentifier>
    </xbrldi:typedMember>
    <xbrldi:typedMember dimension="fsa:IdentificationOfOperatingSegmentDimension">
      <fsa:operatingSegmentIdentifier>x2</fsa:operatingSegmentIdentifier>
    </xbrldi:typedMember>
  </xbrli:scenario>
</xbrli:context>

<fsa:NameOfOperatingSegment contextRef="d_x1_x2" xml:lang="en">Boats</fsa:NameOfOperatingSegment>
```

11   Relation to other taxonomies

Currently, the DCCA taxonomy framework is standalone and independent from any other taxonomy. However, for a number of reasons it was decided that the DCCA taxonomies (currently covering B- and C-class companies) should follow the architecture of the IFRS taxonomy. The most important reason behind this decision is the plan to allow for reporting according to the IFRS taxonomy for D-class companies in the future. It is highly undesired that there are two or more taxonomies operating in a single reporting environment that use different modelling techniques. This situation leads confusions and makes it more complicated for software vendors to develop a single interface supporting different architectures.

Nevertheless the DCCA taxonomy framework contains also a number of departures from the rules set out by the IFRS taxonomy architecture. This is partly related to extensibility issue (see next section) but also results from specific requirements not addressed by the IFRS taxonomy (e.g. tax and statistics reporting).

12 Extensibility

In general, the legal regulations underlying the DCCA taxonomies define certain information requirements for reporting entities. However the regulations in these acts are explicit only to a certain level of detail. This is due to the fact that it is impossible to foresee and define every piece of information that needs to be reported in order to reflect a fair and true view of entity's financial performance and position especially that reporting entities operate in a changeable business environment and their activities vary in type and scale. Therefore, the underlying regulations name explicitly only these components of the financial statement that are of high general importance or may be commonly applied across all reporting entities. These terms reflect the content and scope of the DCCA XBRL taxonomy.

There are several solutions for dealing with this issue on the technical (XBRL) level.

In most such cases a taxonomy defines concepts whose data types are not restricted. They may contain any characters (strings) allowing reporting entities to disclose as their content a number of pieces of information on a certain topic described and limited by the meaning of a concept (its label, references, etc.). This information may be simply a set of sentences or it may be arranged using for example HTML tags (formatting of a text or a table layout). The main drawback of this approach is that although the content is classified as belonging to a particular concept in the taxonomy (the general meaning of the information) it is not defined by individual tags that can be analysed individually.

This are also other situations, where the underlying regulations require disclosing certain information of a predefined type that needs to be further characterized in order to identify its exact meaning. For example it is very common that the regulations require from entities to disclose names of their subsidiaries, associates and members of their executive and supervisory boards or to breakdown financial results geographically or by operating segments. The information requirement is therefore defined very vaguely and does not explicitly identify each piece of required data. This is due to the fact that each reporting entity may have different number of related parties or managers and be active in different sectors and areas therefore it is impossible or at least very difficult to name all possible enumerations. In such cases, the taxonomy may define a finite list of vaguely identified artificial enumerations (maximum set of accepted tokens) or use repeatable constructs expanding the general definition.

In the first approach, a taxonomy would contain a number of artificial concepts where each of these concepts is instantiated in a report as a separate enumeration. These concepts may be represented in the taxonomy in a form of separate items (as it was in the previous version of the DCCA taxonomies) or items referring to a listed set of dimensional information. A taxonomy created in such manner anticipates only a certain number of possible enumerations and no more than that.

In the latter approach, a taxonomy contains definition of flexible constructs such as typed dimensions or tuples. Both of these constructs have similar business application but different representation on the syntax level. Tuples are used to bind a number of facts together in case when these facts need to be treated as a set in order to be correctly interpreted. Typed dimension perform

the similar role but they bind facts together by binding each of them to a common 'key' (value of a typed domain).

Another way of achieving the same goal is to allow reporting entities creating extensions i.e. their own XBRL schema and linkbase files importing the base taxonomy and defining the missing concepts and relations. Extensions can be created with different level of flexibility. For example they may only extend the fragments of the base taxonomy which anticipate to be extended (for example "open" structures or explicit dimensions) or freely define XBRL taxonomy structure from scratch reusing the terms defined in the base taxonomy.

For a number of reasons it was decided that the DCCA taxonomies for the current coverage of the information requirements will not be extensible. This means that instance documents submitted to the DCCA must not contain any extension concept.

In order to address the issue of flexibility and generality of underlying legal regulations the DCCA taxonomy contains a number of free text (string) items and typed dimension.

It is important to stress that the level of comparability of data does not depend on the approach selected. The data across all reporting entities is automatically comparable only to the extent to which the base taxonomy is explicit.

Another important assumption is that an XBRL report (instance document) submitted to the DCCA must contain as much as possible but not necessarily all information from the annual accounts which full version copy is filed together with the XBRL file.

13   Versions

Taxonomy version is indicated using a publication date on file names as well as on the folder name following the root location (see Section 4.1 above).

Version information is NOT defined on any of the namespaces, `roleURIs` or any other XBRL technical construct.

Additionally a three-digit component identifying the version is embedded in each file on processing instruction `taxonomy-version` (e.g. `<?taxonomy-version 1.6.0?>`). **First digit** of this component corresponds to a significant change in business requirements (e.g. new legal regulations) or technical aspects (introduction of new specification resulting in significant change in the taxonomy architecture). **Second digit** identifies a change that requires a change in mapping (e.g. new concept is added) within a given scope. **Third digit** reflects changes that do not require remappings (improvements in functionality or minor technical bug unrelated to element names and assignment of dimensional information, for example: change in hierarchy, change in a label or reference as a result of former bugs, etc.).

14   Instance documents

The content of instance documents in determined by the taxonomies that is references. There is however a set of other characteristics defined in instance documents that the taxonomy doesn't

control[25]. The set of rules and hints below shall help entities to comply with the reporting requirements of the DCCA.

14.1   Schema reference

Instance documents must reference (using `link:schemaRef` element) one of the entry schema files as described in section 4.2.3 of this document. According to section 12 of this document it is disallowed that an instance document submitted to the DCCA refers any extension taxonomy.

14.2   Multilingual values

The DCCA taxonomy is bilingual, i.e. all concepts, roles used on extended links and enumerations for token data types are supplied with English and Danish labels defined either in label or generic label linkbases. This allows to browse the taxonomy content in one of these two languages.

Similarly, instance documents can be prepared in English and/or Danish (and additionally any other language). Technically, each textual tag can have `@xml:lang` attribute which informs about the language of the value that it contains. For example: `<t:textualTag contextRef="D" xml:lang="en">This is a text in English</t:textualTag>`.

Moreover, any textual fact in an instance document can be reported many times (i.e. a tag referring to the same context) with different value of `@xml:lang` attribute as presented on Code example 16.

Code example 16

```
<arr:DescriptionOfQualificationsOfAuditedFinancialStatements contextRef="FY2010e" xml:lang="en">
    The audit did not result in any qualifications.
</arr:DescriptionOfQualificationsOfAuditedFinancialStatements>
<arr:DescriptionOfQualificationsOfAuditedFinancialStatements contextRef="FY2010e" xml:lang="da">
    Revisionen har ikke givet anledning til forbehold.
</arr:DescriptionOfQualificationsOfAuditedFinancialStatements>
```

14.3   Precision of values

Precision of reported monetary figures (i.e. information if the amount is in kroner or thousands/millions of kroner or with øre decimal places) is set in instance document for each tag by a reporting entity. This is for the reason, that is it a reporting entity that knows how accurate are the numbers that it reports. Information about this accuracy is reflected using `@decimals` or `@precision` attributes as described in the XBRL 2.1 Specification[26]. It is therefore possible, that an entity reports in an instance document the same information twice: in thousands (with `@decimals="-3"`) and in kroner (with `@decimals="0"`). This approach however is not recommended as it hiders comparability of data and may lead to inconsistencies (two or more different values representing a single fact). Therefore, each fact must be tagged only once with reference to the ISO 4217 currency code and appropriate accuracy. It is the role of a user interface or rendering application to display the numbers properly (i.e. in millions, thousands, etc.).

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[25] These characteristics can be controlled by a formula linkbase that supports the taxonomy. Current version of the DCCA taxonomy does not contain such functionality though.

[26] http://www.xbrl.org/Specification/XBRL-RECOMMENDATION-2003-12-31+Corrected-Errata-2008-07-02.htm#_4.6.3. It is also possible to define custom unit measures such as `<xbrli:measure>mu:thousandDKK</xbrli:measure>`. This however would require change of the data type of items to different than monetary (http://www.xbrl.org/Specification/XBRL-RECOMMENDATION-2003-12-31+Corrected-Errata-2008-07-02.htm#_4.8.2).

14.4 Sign of values

According to section 6.2.1 of this document, the DCCA taxonomy uses the optional `@balance` attribute on all monetary items. Negated labels are in some cases build into the ondinary label in (), e.g. "Gains (losses) from current value….".

It is also important to note, that XBRL is data description not data formatting language. Its aim is to describe each reportable concept in the taxonomy and allow it to be reported as a fact in an instance document that can be exchanges between any two or more entities/institutions. It means that each piece of information is defined in a taxonomy only once and then mapped to and tagged in an instance document also only once. From the data modelling perspective such approach removes redundancy and allows to maintain consistency. The presentation of this data to users is currently out of scope of XBRL taxonomies[27] and should be handled by either the inline XBRL[28] or a consuming and processing application.

15 Enquiries

Any enquiries regarding the taxonomy, its architecture or application should be submitted to the following webpage: kontakt.erst.dk.

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[27] However the XBRL International Consortium has already appointed a working group for the purpose of developing a Rendering Linkbase specification that will be part of the XBRL standard.
[28] http://www.xbrl.org/SpecRecommendations/