TECHNICAL SPECIFICATION

ISO/TS 20625

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Electronic data interchange for administration, commerce and transport (EDIFACT) — Rules for generation of XML scheme files (XSD) on the basis of EDI(FACT) implementation guidelines

Échange de données informatisé pour l'administration, le commerce et le transport (EDIFACT) — Règles pour la génération de fichiers de schéma XML (XSD) basés sur les guides de mise en œuvre d'EDI(FACT)

Reference number
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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of normative document:

— an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;

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An ISO/PAS or ISO/TS is reviewed after three years with a view to deciding whether it should be confirmed for a further three years, revised to become an International Standard, or withdrawn. In the case of a confirmed ISO/PAS or ISO/TS, it is reviewed again after six years at which time it has to be either transposed into an International Standard or withdrawn.

Attention is drawn to the possibility that some of the elements of this Technical Specification may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TS 20625 was prepared by DIN (as DIN 16557-5) and was adopted, under a special “fast-track procedure”, by Technical Committee ISO/TC 154, *Processes, data elements and documents in commerce, industry and administration*, in parallel with its approval by the ISO member bodies.

Annex A of this Technical Specification is for information only.

Introduction

Traditional EDI standards provide a syntax for the implementation of data content in various business processes through the use of data elements, segments and message types. Initially XML provides simply another syntax, which, if used to re-invent EDI, leads to huge new costs thus preventing any achievement of the initial goal - to get small and medium sized enterprises (SME) involved in electronic business processes.

This standard describes how existing EDI know-how can be applied to the XML syntax. XML users would therefore be able to easily use EDI data from existing applications in a consistent manner.

EDIFACT Message Implementation Guidelines (MIGs) describe the implementation of standardised EDIFACT message types within a business process. Therefore MIGs are the suitable source for the derivation of XML schemas. This standard specifies the process of translation.

Electronic data interchange for administration, commerce and transport (EDIFACT) — Rules for generation of XML scheme files (XSD) on the basis of EDI(FACT) implementation guidelines

1 Scope

This standard describes the rules for the derivation of XML schemas from EDI MIGs providing a sound method of representing semantic facts.

This standard describes how to derive XML from UN/EDIFACT MIGs. In principle, the rules are equally applicable to other EDI standards.

This standard does not apply to DTDs.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Technical Specification. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Technical Specification are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 8601:2000-12, *Data elements and interchange formats — Information interchange — Representation of dates and times.*

ISO 9735-1:1998-10, *Electronic data interchange for administration, commerce and transport (EDIFACT) – Application level syntax rules (Syntax version number 4, Syntax release number: 1) – Part 1: Syntax rules common to all parts.*

3 Terms, symbols and abbreviations

For the purpose of this standard the following terms, symbols and abbreviations apply.

3.1
BSR
Basic Semantics Register

3.2
BSU
Basic Semantic Unit

3.3
DTD
Document Type Definition

3.4
EDI
Electronic Data Interchange

3.5
EDIFACT
Electronic Data Interchange for Administration, Commerce and Transport

3.6
ELEMENT
Syntactic building block containing data and/or attributes.

3.7
HTML
Hyper Text Mark-up Language

3.8
MIG
Message Implementation Guideline

3.9
NAME
A name in the context of XML starts with a letter or a permitted special character followed by letters, numbers, hyphens, underlines, colons or points. All those are known as name tag. Names starting with "xml" or with a character string which fits to (('X'|'x') ('M'|'m') ('L'|'l') are reserved for XML standardisation.

3.10
SGML
Standard Generalised Mark-up Language

3.11
Tag
Formatting instruction or semantic markup

3.12
Template
Predefined reference pattern compared with the complete entity to be recognised, or one of its parts.

3.13
XLL
Extensible Link Language

3.14
XML
Extensible Mark-up Language

3.15
XSD
Extensible Schema Definition

3.16
XSL
Extensible Stylesheet Language

3.17
W3C
World Wide Web Consortium

4 Typical contents of Message Implementation Guidelines

4.1 Level: MIG

a) Identification of MIG

b) Identification of the supporting EDIFACT directory

c) Identification of the message type and, if necessary, the industry subsets

d) Additional text

4.2 Level: Message Type

a) Structure of the message type (segments and segment groups) and indication of their portions used

b) Status (standard versus application) of the segments and segment groups in use

c) Context related names and descriptions of the segments and segment groups

d) Examples

e) Dependencies between segments and segment groups

f) Additional text, comments on message type level

4.3 Level: Segments and Composite Data Elements

a) Structure of the segments and composite data elements and indication of their portions used

b) Status (standard versus application) of the data elements and composite data elements

c) Dependencies between data elements and composite data elements within a segment and within the message type

d) Context related names and descriptions

e) Examples

f) Additional text, comments

4.4 Level: Data element

a) Characteristics of EDI data elements (type, length) and their usage restrictions based upon MIG and context related implementation

b) Context related names and descriptions of data elements and, if necessary, unique tags and descriptions, e. g. derived from data repositories such as ISO-BSR (see ISO/TS 16668).

c) Examples

d) Additional text, comments

e) Allowed values

f) Constants

g) Explicitly given EDIFACT codes or ISO/UN code lists

h) Explicitly given user defined codes

i) Implicitly given EDIFACT codes or ISO/UN code lists

j) Implicitly given user defined or other codes not listed within the EDIFACT code directory

k) Rules to which data element values shall fit

l) Mapping to fields within applications and flat files, respectively

5 Requirements of derivation rules for schemas

a) The MIG technical information as listed in section 4 shall be incorporated into schemas as necessary.

b) The structure of the underlying MIG must be comprehensible (both the XML and traditional EDI guides shall be compatible in structure).

c) The resulting XML messages should be as lean as possible.

d) One of the different variants by which semantic facts can be represented in XML is specified by this standard as being mandatory.

e) The developer of a MIG decides which data is important and which structures are meaningful for his application. By this, he decides which structure elements shall be incorporated into the schema.

6 Rules for the generation of XML schemas derived from EDI MIGs

NOTE The namespace ‘din’ in the examples of this section is for example purposes only and can either be omitted or any other suitable namespace can be used.

6.1 Rule 1: Tag naming

6.1.1 Variant 1

The names of the XML structure will be derived from the EDI tags. They will be given a prefix depending on the structure level (segment group, segment, composite data element or data element):

„M_“+ message type + [suffix]	Example: M_ORDERS
„G_“+ segment group + [suffix]	Example: G_SG36 or G_LIN_ALC
„S_“+ segment + [suffix]	Example: S_LIN
„C_“+ composite data element + [suffix]	Example: C_C082_2
„D_“+ data element + [suffix]	Example: D_3035 or D_3035_10

The suffix is optional and can be generated based upon various semantic understanding of EDI elements.

If the XML schema file is being generated from an EDIFACT MIG only prefix "D_" would be necessary. However, as the other prefixes have to be used by those EDI standards which identify composite data elements and data elements by using numeric tags, they are mandatory.

The second notation of segment group tags can be used when the based EDI standard that is being converted from provides no explicite segment groups or whenever the notation of the relevant trigger segments is prefered. In this case the nesting of the segment groups has to be given as sequence of their trigger segments.

The W3C XML recommendation requires ”self-explanatory tags“. EDI[FACT] tags fulfil this condition better than tags in natural language, because they represent an established Lingua Franca for EDI specialists.

Example:

```
<xsd:element name ="M_ORDERS">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="din:D_1004"/>
        <xsd:element ref="din:D_2380"/>
        <xsd:element ref="din:D_2380_2"/>
        <xsd:element ref="din:G_SG2"/>
        <xsd:element ref="din:G_SG2_2"/>
        <xsd:element ref="din:D_6345" minOccurs="0" maxOccurs="5"/>
        <xsd:element ref="din:G_SG25" minOccurs="1" maxOccurs="10"/>
        <xsd:element ref="din:D_5004_2"/>
      </xsd:sequence>
    </xsd:complexType>
</xsd:element>
```

6.1.2 Variant 2

From suitable comments ”speaking" tags can be generated if desired. If using "speaking" tags the EDI origin of the corresponding element shall be documented by an appropriate attribute value (see also section 6.9) or with other means of documentation.

Example:

```
  <xsd:element name ="M_ORDERS">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="din:Order_number"/>
        <xsd:element ref="din:Order_date"/>
        <xsd:element ref="din:Delivery_date"/>
        <xsd:element ref="din:Buyer"/>
        <xsd:element ref="din:Seller"/>
        <xsd:element ref="din:Currency" minOccurs="0" maxOccurs="5"/>
        <xsd:element ref="din:Line_item_details" minOccurs="1"
         maxOccurs="10"/>
        <xsd:element ref="din:Total_order_value"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
...
  <xsd:element name ="Name">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..10">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.NAD.C080.3036(0120:040:01)"/>
```

```
<!-- The attribute EDIPath contains the reference to the original EDI
standard -->
        </xsd:extension>
      </xsd:simpleContent>
  </xsd:complexType>
</xsd:element>
```

6.2 Rule 2: Structure

6.2.1 The same EDI tags or names will produce aggregate elements (see also rule 6.10).

6.2.2 If a differenciation between different semantic occurencies of the same data container is desired, different tags or names have to be assigned either by adding a suffix to the EDI tag or by using different names.

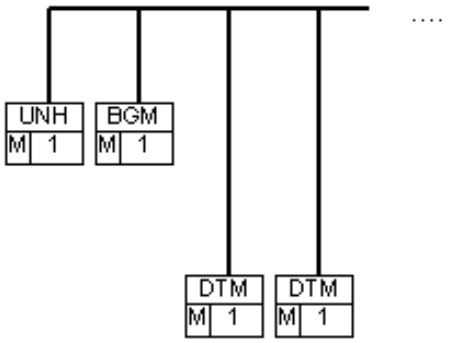
6.2.3 The schema may contain further ‘stapling’ elements for groups of messages or the interchange itself (comparable with UN/EDIFACT UNG-UNE and UNB-UNZ).

6.2.4 Any use of an EDI data container (message type, segment group, segment etc.) can be shown as an independent XML element. The existing EDI structure is the source of the XML structure. Hence the XML schema must have a structure compatible to the EDI MIG. The set of the generated XML elements is less than or equal to the set of EDI elements.

NOTE The manner in which the author has written a MIG must have satisfied the needs of the respective business process. Thus the schema must be structured accordingly. If for example the MIG contains "document date“ and "requested delivery date“ in two separate occurrences of the DTM segment separate XML elements will be generated accordingly. If those two have been documented within the same occurrence of the DTM segment, only one XML element will be generated.

Examples for 6.2.1 and 6.2.2:

Variant 1:
The guide contains two DTM segments (see figure 1).




```
DTM (#1), Status M, Occurrence 1, Qualifier in DE 2005: 4, Name: Order date
DTM (#2), Status M, Occurrence 1, Qualifier in DE 2005: 2, Name: Requested
delivery date
```

Figure 1 — Message diagram of a guide containing two DTM segments

The default translation into an XML schema according 6.2.1 is as follows:

```
<xsd:element name ="S_DTM">
  <xsd:complexType>
```

```
        <xsd:sequence>
          <xsd:element ref="din:D_2005"/>
          <xsd:element ref="din:D_2380"/>
        </xsd:sequence>
      </xsd:complexType>
    <xsd:element name ="D_2005" type ="din:D_2005">
      <xsd:annotation>
        <xsd:documentation>Type of date</xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name ="D_2380" type ="xsd:decimal">
      <xsd:annotation>
        <xsd:documentation>Date/Time/Period</xsd:documentation>
      </xsd:annotation>
    </xsd:element>
```

NOTE Element D_2005 is an enumeration type and contains the two possible values '2' and '4'.

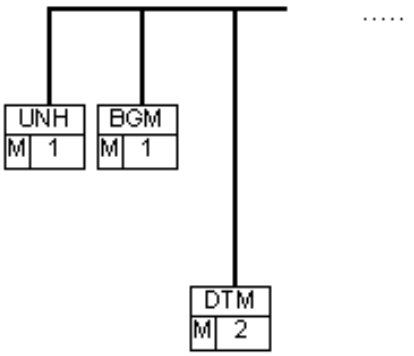
Alternatively, application of rule 6.2.2 would result

```
  <xsd:element name ="D_2380" type ="xsd:decimal">
    <xsd:annotation>
      <xsd:documentation>Order date</xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name ="D_2380_2" type ="xsd:decimal">
    <xsd:annotation>
      <xsd:documentation>Delivery date</xsd:documentation>
    </xsd:annotation>
  </xsd:element>
```

or

```
  <xsd:element name ="Order_date" type ="xsd:decimal"/>
  <xsd:element name ="Delivery_date" type ="xsd:decimal"/>
```

Variant 2:
Guide implicitly documenting dates using only one DTM segment (see figure 2).



DTM, Status M, Occurrence 2, Qualifier in DE 2005: 2 and 4

Figure 2 — Message diagram of a guide containing only one DTM segment

The translation into an XML schema is analogue to the default example according to rule 6.2.1 as follows:

```
    <xsd:element name ="S_DTM">
      <xsd:complexType>
```

```
      <xsd:sequence>
        <xsd:element ref="din:D_2005"/>
        <xsd:element ref="din:D_2380"/>
      </xsd:sequence>
    </xsd:complexType>
  <xsd:element name ="D_2005" type ="din:D_2005">
    <xsd:annotation>
      <xsd:documentation>Type of date</xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name ="D_2380" type ="xsd:decimal">
    <xsd:annotation>
      <xsd:documentation>Order date</xsd:documentation>
    </xsd:annotation>
  </xsd:element>
```

Example for 6.2.3:

```
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:element name ="S_UNB">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="D_0004" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="D_0010" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="D_0017" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="D_0020" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="M_ORDERS" minOccurs="1" maxOccurs="unbounded"/>
      </xsd:sequence>
      ...
```

6.3 Rule 3: Structure optimisation

If flat XML structures are of primary interest, the application of the following rules will give an optimised result. However, for integration in existing systems, one should bear in mind the minimum data structure requirements established by the EDI system in use rather than the pure syntax requirements.

6.3.1 An EDIFACT segment that contains more than one data element with business data has actually a summarising function. If the segment only contains one data element with business data there is no summarising function on the segment level. Therefore in transformation towards XSD schema this segment level can disappear.

6.3.2 Elements of the primary standard not being used in the MIG will be omitted.

6.3.3 Constant qualifiers or constant codes are not transferred into the XML structure (for a definite data element only one code had been documented in the MIG). The corresponding data elements should not be transferred into XML.

Example:

Derived from:

```
  <xsd:element name ="S_DTM">
   <xsd:complexType>
     <xsd:sequence>
       <xsd:element ref="din:C_C507"/>
     </xsd:sequence>
   </xsd:complexType>
  </xsd:element>
```

```
 <xsd:element name ="C_C507">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="din:D_2005"/>
      <xsd:element ref="din:D_2380"/>
      <xsd:element ref="din:D_2379"/>
    </xsd:sequence>
  </xsd:complexType>
 </xsd:element>
<xsd:element name ="D_2379" fixed ="102"/>
<xsd:element name ="D_2005" fixed ="4"/>
<xsd:element name ="D_2380" type ="xsd:decimal">
  <xsd:annotation>
    <xsd:documentation>Order date</xsd:documentation>
  </xsd:annotation>
</xsd:element>
```

This rule generates:

```
<xsd:element name ="D_2380" type ="xsd:decimal">
    <xsd:annotation>
      <xsd:documentation>Order date</xsd:documentation>
    </xsd:annotation>
</xsd:element>
```

The levels of segments and composite data elements are not required as they contain constant qualifiers only. Therefore they are omitted.

6.4 Rule 4: Status

EDI status and application status within the MIG will be summarised in the XML status. The more restrictive status will be kept.

The status “mandatory“ will be represented by a minimum repeating factor of "1", the status ”conditional“ by a minimum repeating factor of "0". The status is given by the attribute **minOccurs.**

Examples:

Conditional:

Segment group	`<xsd:element ref="din:G_SG7" minOccurs="0" maxOccurs="5"/>`
Segment	`<xsd:element ref="din:S_IMD" minOccurs="0" maxOccurs="1"/>`
Composite data element	`<xsd:element ref="din:C_C059" minOccurs="0" maxOccurs="1"/>`
Data element	`<xsd:element ref="din:D_4022" minOccurs="0" maxOccurs="1"/>`

Mandatory:

Segment group	`<xsd:element ref="din:G_LIN" minOccurs="1" maxOccurs="10"/>`
Segment	`<xsd:element ref="din:S_LIN" minOccurs="1" maxOccurs="1"/>`
Composite data element	`<xsd:element ref="din:C_C516" minOccurs="1" maxOccurs="1"/>`
Data element	`<xsd:element ref="din:D_0065" minOccurs="1" maxOccurs="1"/>`

6.5 Rule 5: Maximum occurrences

The number of occurrences of the MIG generates the XML occurrence. The value will be provided using the XSD attribute **maxOccurs**.

Example:

Segment group `<xsd:element ref="din:G_SG25" minOccurs="1" maxOccurs="10"/>`
Segment `<xsd:element ref="din:S_LIN" minOccurs="1" maxOccurs="1"/>`

From EDIFACT syntax version 4 (ISO 9735-1) and the implementation of appropriate directories the occurrence rule is applicable with composite data elements and data elements.

6.6 Rule 6: Data element formats

6.6.1 The representation ”an“ and ”a“ become „string“, ”n“ becomes „decimal“. For the lengths of alphanumeric and numeric data elements as defined within the MIG appropriate simpleTypes will be generated.

6.6.2 Date formats may be translated into XML data types "date", "timeInstant" and "time". In this case a format conversion is required. The representation of these formats within XML is:

date : `1999-05-31 (according to ISO 8601)`
time : `13:20:00`
timeInstant: `1999-05-31T13:20:00`

Example:

```
<xsd:simpleType name="string1..70">
    <xsd:restriction base="xsd:string">
      <xsd:minLength value="1"/>
      <xsd:maxLength value="70"/>
    </xsd:restriction>
  </xsd:simpleType>
```

6.7 Rule 7: Code lists and user defined codes

6.7.1 Coded data elements will be defined as complexType. If for a data element only specific codes are documented within the MIG, only these codes are allowed for the application. Thus only these codes are transferred into the XML structure.

6.7.2 If the MIG does not provide codes for a data element, the whole available code list is allowed. This whole code list will be transferred into the XML structure.

6.7.3 Repeatedly used code lists may be provided by using external files.

6.7.4 The code names will optionally be stored as annotation with the code.

6.7.5 According to rule 3 (see section 6.3) constant qualifiers or constant codes will not be transferred into the XML structure (for a specific data element only one code had been documented within the MIG). The respective data elements need not be provided within the XML structure. However, if the usage of a data element is explicitly required, it has to be included within the XML structure (e. g. a currency using data element 6345 in segment MOA).

Examples:

(1)

```
<xsd:element name ="D_6345" type ="D_6345"/>
<xsd:simpleType name="D_6345">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="DEM">
        <xsd:annotation>
          <xsd:documentation>Deutsche Mark</xsd:documentation>
        </xsd:annotation>
      </xsd:enumeration>
      <xsd:enumeration value="EUR">
        <xsd:annotation>
          <xsd:documentation>Euro</xsd:documentation>
        </xsd:annotation>
      </xsd:enumeration>
      <xsd:enumeration value="GBP">
        <xsd:annotation>
          <xsd:documentation>Pfund Sterling</xsd:documentation>
        </xsd:annotation>
      </xsd:enumeration>
    </xsd:restriction>
  </xsd:simpleType>
```

(2)

```
<xsd:simpleType name="D_6347">
 <xsd:restriction base="xsd:string">
    <xsd:enumeration value="1"/>
    <xsd:enumeration value="2"/>
    <xsd:enumeration value="3"/>
    <xsd:enumeration value="4"/>
    <xsd:enumeration value="5"/>
    <xsd:enumeration value="6"/>
    <xsd:enumeration value="7"/>
   ... etc. listing of the complete code list
</xsd:simpleType>
```

(3)

```
<?xml version="1.0"?>
<xsd:schema targetNamespace="http://www.din.de/example/orders"
             xmlns:din="http://www.din.de/example/orders"
             xmlns:xsd="http://www.w3.org/2000/10/XMLSchema">
<include schemaLocation="CL_6411.xsd"/>
<xsd:element name ="D_6411" type ="din:CL_6411">
    <xsd:annotation>
      <xsd:documentation>Measure unit</xsd:documentation>
    </xsd:annotation>
</xsd:element>
...
```

External file with codes:

```
<?xml version="1.0"?>
<xsd:schema targetNamespace="http://www.din.de/ example/orders"
             xmlns:din="http://www.din.de/ example/orders"
             xmlns:xsd="http://www.w3.org/2000/10/XMLSchema">
<xsd:simpleType name="CL_6411">
   <xsd:restriction base="xsd:string">
      <xsd:enumeration value="ACR"/>
      <xsd:enumeration value="AMH"/>
   ……
```

(4)

```
<xsd:simpleType name="CL_6411">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="TNE">
        <xsd:annotation>
          <xsd:documentation>Tonne (1000 kg) *</xsd:documentation>
        </xsd:annotation>
      </xsd:enumeration>
      <xsd:enumeration value="KGM">
        <xsd:annotation>
          <xsd:documentation>Kilogram *</xsd:documentation>
        </xsd:annotation>
      </xsd:enumeration>
      <xsd:enumeration value="GRM">
        <xsd:annotation>
          <xsd:documentation>Gram *</xsd:documentation>
        </xsd:annotation>
      </xsd:enumeration>
      <xsd:enumeration value="DZN">
        <xsd:annotation>
          <xsd:documentation>Dozen</xsd:documentation>
        </xsd:annotation>
      </xsd:enumeration>
    </xsd:restriction>
  </xsd:simpleType>
```

(5)

```
<xsd:element name ="D_6345" type ="din:D_6345"/>
  <xsd:simpleType name="D_6345">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="DEM">
        <xsd:annotation>
          <xsd:documentation>Deutsche Mark</xsd:documentation>
        </xsd:annotation>
       </xsd:enumeration>
    </xsd:restriction>
  </xsd:simpleType>
```

6.8 Rule 8: Names of EDI objects

6.8.1 Standardised or user defined names of segment groups, segments, composite date elements and data elements may be provided as attribute "annotation" within the schema. Only one EDI name is permitted as an attribute for any one XML element .

6.8.2 If there are both standard and user defined names for an EDI object only the user defined name shall be kept.

NOTE The last sentence refers to the name of an object which may be found as user defined name, BSU or the like within MIGs. In this way, the XML file remains lean and logical mapping is easily possible using a parser.

Examples:

(1)

```
  <xsd:element name ="S_DTM">
    <xsd:annotation>
       <xsd:documentation>Date/Time/Period</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
```

```
      <xsd:sequence>
        <xsd:element ref="din:D_2005"/> …
```

(2)

```
  <xsd:element name ="S_DTM">
   <xsd:annotation>
      <xsd:documentation>Order or delivery date </xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="din:D_2005"/> …
```

6.9 Rule 9: Mapping details

6.9.1 As far as the MIG contains mapping details, "anchor points" may be created as attributes. They shall allow easy implementation of an XML exchange format within EDI sub-systems.

6.9.2 The EDI[FACT] source will be provided using the attribute "EDISource". This notation combines the functionality of implementation documentation with the basic information of a directory release – for example the EDIFACT directory.

The following rules apply:

— The path is indicated in the form of "segmentgroup.segment.compositedataelement.dataelement" or "segmentgroup.segment.dataelement".

— The segment group may occur multiple to show the levels of the EDI[FACT] structure.

— In the case of multiple semantic variants of segment groups the qualifying segment, its qualifier and the respective value of the qualifier should be given in square brackets.

At the end the sequence number of the segment as given in the original EDIFACT message type will be added as well as the sequence number of the data element (composite data element or simple data element) within the respective segment after a colon, and, if appropriate, also the sequence number of the component data element within a composite data element.

For example, the notation (0120:020:02) shall be read as follows: "Sequence number of the segment in the standard" : "sequence number of the composite data element or data element" : "if appropriate sequence number of the component data element within the composite data element".

Examples:

(1)

```
  <xsd:element name ="D_3433">
    <xsd:annotation>
      <xsd:documentation>BIC of buyer's bank</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="xsd:decimal">
          <xsd:attribute name="Mapping_anchor" type="xsd:string" use="fixed"
             value="BIC-BB"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
```

(2)

```
<xsd:element name ="D_3433">
    <xsd:annotation>
      <xsd:documentation>BIC of buyer's bank</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="xsd:decimal">
          <xsd:attribute name="EDIPath" type="xsd:string" use="fixed"
             value="SG2[NAD.3035=BY].FII.C088.3433(0140:030:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
```

6.10 Rule 10: Aggregation of equally named data container

If there are implementation scenarios with different message types and the user wants to aggregate equally named data container and describe them unique within the scenario the following rules apply:

6.10.1 Structure

Aggregated data containers contain at least all those sub-elements which are used and documented within the Message Implementation Guideline(s). The sequence of those elements must be compliant with the sequence given in the EDI-Standard.

6.10.2 Status

In an aggregated data container the sub-element status shall be set to optional if this sub-element is used once optionally within the data container in question in the whole message scenario.

Example: ORDERS DTM 2379 status: R, IFTMIN DTM 2379 status: O

→ XML status: O

6.10.3 Format

The format is being defined according to the widest used format specified in the Message Implementation Guideline(s).

Example: ORDERS DTM 2380 format: n8, IFTMIN DTM 2380 format: an..35

→ XML format: string1..35

6.10.4 Code list

For each coded data element an aggregated code list shall be created that contains all codes applicable according to the Message Implementation Guideline(s).

Example: ORDERS DTM 2380 code list: 102;103, IFTMIN DTM 2380 code list: 103;203

→ XML code list: 102;103;203

Annex A
(informative)

Example for mapping from EDIFACT to XML

NOTE For practical reasons the example given in this annex is based on German language speaking tags. However, the use of other languages is not excluded. Status R means "required" and status O means "optional". Both are application status information and have the same meaning as M(andatory) and C(onditional). Status N means "not used".

A.1 EDIFACT based structure for the mapping

A.1.1 General

The basis for the XML structure to be generated is an implementation of the EDIFACT message type ORDERS (Purchase order) with following details.

A.1.2 Message structure

A.1.2.1 Segment table

Table A.1 — Segment table of the based EDIFACT ORDERS

	No.	Tag	St	Rep	Contents
	01	**UNH**	M	1	Message header
	02	**BGM**	M	1	Document type and number
	03	**DTM**	M	1	Order date
	04	**DTM**	M	1	Delivery date
		SG2	R	1	Buyer
	05	**NAD**	M	1	Identification of the Buyer
	06	**FII**	O	1	Buyers bank account information
		SG3	O	1	VAT-number of buyer
	07	**RFF**	M	1	VAT-number
		SG5	O	1	Buyer's contact information
	08	**CTA**	M	1	Buyer's responsible employee
	09	**COM**	O	1	Phone number
	10	**COM**	O	1	Communication contact
		SG2	R	1	Seller
	11	**NAD**	M	1	Identification of seller
		SG7	O	1	Currency
	12	**CUX**	M	1	Order currency
		SG25	R	10	Line Items
	13	**LIN**	M	1	Suppliers article number
	14	**IMD**	O	1	Short description of the product
	15	**QTY**	O	1	Ordered quantity
	16	**MOA**	O	1	Line item amount

		SG27	O	1	Item price
	17	**PRI**	M	1	Price per item / unit
	18	**UNS**	M	1	Section control
	19	**MOA**	R	1	Total amount
	20	**UNT**	M	1	Message trailer

A.1.2.2 Message structure diagram

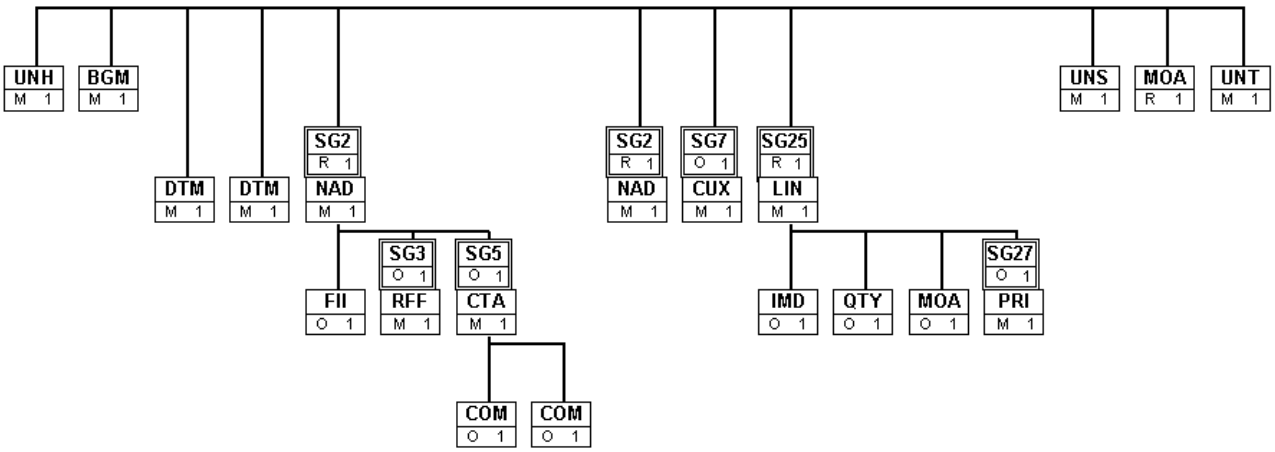


Figure A.1 — Message structure diagram (Branching Diagram) of the based EDIFACT ORDERS

A.1.3 Segment description

Segment: **UNH** Seq. No.: 1 Level: 0 **Message header**
Status: M Max. Occ.: 1

Name: **Message header**
Description of segment:

EDIFACT				Application		
Tag	Name	St	Format	St	Example	Use / Comments
0062	Message reference number	M	an..14	M	+1	Unique numberof the message assigned by sender.
S009	MESSAGE IDENTIFIER	M		M		
0065	Message type identifier	M	an..6	M	+ORDERS	**ORDERS = Orders message**
0052	Message type version number	M	an..3	M	:D	**D = Draft directory**
0054	Message type release number	M	an..3	M	:93A	**93A = EDIFACT Directory Version 93A**
0051	Controlling agency	M	an..2	M	:UN'	**UN = UN/ECE/TRADE/WP.4, United Nations Standard Messages (UNSM)**

Comment:
This is the header segment of the message.

Example:
UNH+1+ORDERS:D:93A:UN'

Segment: **BGM** Seq. No.: 2 Level: 0 **Beginning of message**
Status: M Max. Occ.: 1

Name: **Document type and number**

Description of segment:

EDIFACT					Application
Tag	Name	St Format	St	Example	Use / Comments
C002	DOCUMENT/MESSAGE NAME	C	R		
1001	Document/message name, coded	C an..3	R	+220	**220 = Order**
1004	Document/message number	C an..35	R	+1-96'	Format an..8 Document number, assigned by sender **Order number**

Comment:

Example:
BGM+220+1-96'

Segment: **DTM** Seq. No.: 3 Level: 1 **Date/time/period**
Status: M Max. Occ.: 1

Name: **Order date**
Description of segment:

EDIFACT				Application	
Tag	Name	St Format	St	Example	Use / Comments
C507	DATE/TIME/PERIOD	M	M		
2005	Date/time/period qualifier	M an..3	M	+4	**4 = Order date/time**
2380	Date/time/period	C an..35	R	:19960101	Format n8 **Order date**
2379	Date/time/period format qualifier	C an..3	R	:102'	**102 = JJJJMMTT**

Comment:

Example:
DTM+4:19960101:102'

Segment: **DTM** Seq. No.: 4 Level: 1 **Date/time/period**
Status: M Max. Occ.: 1

Name: **Delivery date**
Description of segment:

EDIFACT					Application
Tag	Name	St Format	St	Example	Use / Comments
C507	DATE/TIME/PERIOD	M	M		
2005	Date/time/period qualifier	M an..3	M	+2	**2 = Delivery date/time, requested**
2380	Date/time/period	C an..35	R	:19960110	Format n8 **Delivery date**
2379	Date/time/period format qualifier	C an..3	R	:102'	**102 = CCYYMMDD**

Comment:
This segment is being used for the trasmission of delivery date requested.

Example:
DTM+2:19960110:102'

Group: SG2 Status: R Max. Occ.: 1 Buyer

In this instance of SG 2 information concerning the buyer will be transmitted.

Segment: NAD Seq. No.: 5 Level: 1 **Name and address**
Status: M Max. Occ.: 1

Name: **Identification of the Buyer**

Description of segment:

EDIFACT				Application	
Tag	Name	St Format	St	Example	Use / Comments
3035	Party qualifier	M an..3	M	+BY	**BY = Buyer**
C082	PARTY IDENTIFICATION DETAILS	C	N		
3039	Party id identification	M an..17	N		
C058	NAME AND ADDRESS	C	N		
3124	Name and address line	M an..35	N		
C080	PARTY NAME	C	R		
3036	Party name	M an..35		+BONBON AG	Format an..10 **Buyer name**
C059	STREET	C	O		
3042	Street and number/P.O. Box	M an..35	M	+SIRUPSTRASSE 15	**Buyer street**
3164	City name	C an..35	O	+ZUCKERSTADT	**Buyer city**
3229	Country sub-entity identification	C an..9	N		
3251	Postcode identification	C an..9	O	+55555'	Format n5 **Buyer postcode**

Comment:

Example:
NAD+BY+++BONBON AG+SIRUPSTRASSE 15+ZUCKERSTADT++55555'

Group: SG2 Status: R Max. Occ.: 1 Buyer

In this instance of SG 2 information concerning the buyer will be transmitted.

Segment: FII Seq. No.: 6 Level: 2 **Financial institution information**
Status: O Max. Occ.: 1

Name: **Buyers bank account information**

Description of segment:

EDIFACT				Application	
Tag	Name	St Format	St	Example	Use / Comments
3035	Party qualifier	M an..3	M	+BB	**BB = Buyer's bank**
C078	ACCOUNT IDENTIFICATION	C	R		
3194	Account holder number	C an..17	R	+1236547890	Format n10 **Buyer account number** Account number of buyer. According to German law anonymous accounts are forbidden.
3192	Account holder name	C an..35	R	:BONBON AG	Format an..10 Account holder. To prevent any legal problems the name of account holder has to be transmitted.
C088	INSTITUTION IDENTIFICATION	C	R		
3433	Institution name identification	C an..11	R	+10090045	Format n8 **Buyer BIC**
1131	Code list qualifier	C an..3	R	:25	**25 = Bank identification**
3055	Code list responsible agency, coded	C an..3	R	:131	**131 = German bankers association**
3434	Institution branch number	C an..17	O	:262	This element can be used for specification of the financial institutions branch number.
1131	Code list qualifier	C an..3	N		
3055	Code list responsible agency, coded	C an..3	N		
3432	Institution name	C an..70	O	:SBANK'	**Buyer bank name** Contains the name of buyer's bank.

Comment:
This segment is being used for transmission of buyer's bank and account number.

Example:
FII+BB+1236547890:BONBON AG+10090045:25:131:262:::SBANK'

Group: **SG2** Status: R Max. Occ.: 1 Buyer

In this instance of SG 2 information concerning the buyer will be transmitted.

Group: **SG3** Status: O Max. Occ.: 1 VAT-number of buyer

Segment: **RFF** Seq. No.: 7 Level: 2 **Reference**
Status: M Max. Occ.: 1

Name: **VAT-number**
Description of segment:

EDIFACT			Application		
Tag	Name	St Format	St	Example	Use / Comments
C506	REFERENCE	M	M		
1153	Reference qualifier	M an..3	M	+VA	**VA = VAT registration number**
1154	Reference number	C an..35	R	:DE9988877'	**Buyer VAT ID number**

Comment:

Example:
RFF+VA:DE9988877'

Group: SG2 Status: R Max. Occ.: 1 Buyer

In this instance of SG 2 information concerning the buyer will be transmitted.

Group: SG5 Status: O Max. Occ.: 1 Buyer's contact information

Segment: CTA Seq. No.: 8 Level: 2 **Contact information**
Status: M Max. Occ.: 1

Name: **Buyer's responsible employee**
Description of segment:

EDIFACT			Application		
Tag	Name	St Format	St	Example	Use / Comments
3139	Contact function, coded	C an..3	R	+IC	**IC = Information contact**
C056	DEPARTMENT OR EMPLOYEE DETAILS	C	O		
3413	Department or employee identification	C an..17	O	+Bart Simpson'	Format an..15 **Buyer contact**

Comment:

Example:
CTA+IC+Bart Simpson'

Group: SG2 Status: R Max. Occ.: 1 Buyer

In this instance of SG 2 information concerning the buyer will be transmitted.

Group: SG5 Status: O Max. Occ.: 1 Buyer's contact information

Segment: COM Seq. No.: 9 Level: 3 **Communication contact**
Status: O Max. Occ.: 1

Name: **Phone number**
Description of segment:

EDIFACT			Application		
Tag	Name	St Format	St	Example	Use / Comments
C076	COMMUNICATION CONTACT	M	M		
3148	Communication number	M an..25	M	+05368-22347	Format an..12 **Buyer phone number**
3155	Communication channel qualifier	M an..3	M	:TE'	**TE = Telephone**

Comment:

Example:
COM+05368-22347:TE'

Group: SG2 Status: R Max. Occ.: 1 Buyer

In this instance of SG 2 information concerning the buyer will be transmitted.

Group: SG5 Status: O Max. Occ.: 1 Buyer's contact information

Segment: COM Seq. No.: 10 Level: 3 **Communication contact**
Status: O Max. Occ.: 1

Name: **Communication contact**
Description of segment:

EDIFACT				Application	
Tag	Name	St Format	St	Example	Use / Comments
C076	COMMUNICATION CONTACT	M	M		
3148	Communication number	M an..25	M	+05368-22555	Format an..12 **Buyer fax number**
3155	Communication channel qualifier	M an..3	M	:FX'	**FX = Telefax**

Comment:

Example:
COM+05368-22555:FX'

Group: SG2 Status: R Max. Occ.: 1 Seller

In this instance of SG 2 information concerning the seller will be transmitted.

Segment: NAD Seq. No.: 11 Level: 1 **Name and address**
Status: M Max. Occ.: 1

Name: **Identification of seller**

Description of segment:

EDIFACT				Application	
Tag	Name	St Format	St	Example	Use / Comments
3035	Party qualifier	M an..3	M	+SE	**SE = Seller**
C082	PARTY IDENTIFICATION DETAILS	C	N		
3039	Party id identification	M an..17	N		
C058	NAME AND ADDRESS	C	N		
3124	Name and address line	M an..35	N		
C080	PARTY NAME	C	R		
3036	Party name	M an..35	M	+KAKAO GMBH	Format an..10 **Seller name**
C059	STREET	C	O		
3042	Street and number/P.O. Box	M an..35	M	+FRUCHT STRASSE 1	**Seller street**
3164	City name	C an..35	O	+SAHNEB ERG	**Seller city**
3229	Country sub-entity identification	C an..9	N		
3251	Postcode identification	C an..9	O	+98765'	Format n5 **Seller postcode**

Comment:

Example:

NAD+SE+++KAKAO GMBH+FRUCHTSTRASSE 1+SAHNEBERG++98765'

Group:	**SG7**	Status: O	Max. Occ.: 1	Currency	
Segment:	**CUX**	Seq. No.: 12 Status: M	Level: 1 Max. Occ.: 1	**Currencies**	

Name: **Order currency**

Description of segment:

EDIFACT				Application	
Tag	Name	St Format	St	Example	Use / Comments
C504	CURRENCY DETAILS	C	R		
6347	Currency details qualifier	M an..3	M	+2	**2 = Reference currency**
6345	Currency, coded	C an..3	R	:EUR	**Order currency**
6343	Currency qualifier	C an..3	O	:9'	**9 = Order currency**

Comment:

Example:

CUX+2:EUR:9'

Group:	**SG25**	Status: R	Max. Occ.: 10	Line Items	
Segment:	**LIN**	Seq. No.: 13 Status: M	Level: 1 Max. Occ.: 1	**Line item**	

Name: **Suppliers article number**

Description of segment:

EDIFACT				Application	
Tag	Name	St Format	St	Example	Use / Comments
1082	Line item number	C n..6	O	+1	Format n..5 **Line number**
1229	Action request/notification, coded	C an..3	N		
C212	ITEM NUMBER IDENTIFICATION	C	R		
7140	Item number	C an..35	R	+2001	Format an..10 **Item number**
7143	Item number type, coded	C an..3	R	:SA'	**SA = Supplier's article number**

Comment:

The line items part of an order consists of one or more repetitions of a group of segments, starting with a LIN segment. Every LIN segment refers to exactly one product.

Example:

LIN+1++2001:SA'

Group:	**SG25**	Status: R	Max. Occ.: 10	Line Items	
Segment:	**IMD**	Seq. No.: 14 Status: O	Level: 2 Max. Occ.: 1	**Item description**	

Name: **Short description of the product**

Description of segment:

EDIFACT				Application	
Tag	Name	St Format	St	Example	Use / Comments
7077	Item description type, coded	C an..3	R	+F	**F = Free-form**
7081	Item characteristic, coded	C an..3	N		
C273	ITEM DESCRIPTION	C	R		
7009	Item description identification	C an..7	N		
1131	Code list qualifier	C an..3	N		
3055	Code list responsible agency, coded	C an..3	N		
7008	Item description	C an..35	R	: SCHOKOL ADENMAS SE	Format an..20 Item desription, line 1. If this segment is being used, the description has to be transmitted. **Item text line1**
7008	Item description	C an..35	O	:BRAUN'	Format an..20 **Item text line2**

Comment:

Example:

IMD+F++:::SCHOKOLADENMASSE:BRAUN'

Group:	**SG25**	Status: R	Max. Occ.: 10	Line Items	
Segment:	**QTY**	Seq. No.: 15 Status: O	Level: 2 Max. Occ.: 1	**Quantity**	

Name: **Ordered quantity**

Description of segment:

EDIFACT			Application		
Tag	Name	St Format	St	Example	Use / Comments
C186	Quantity details	M	M		
6063	Quantity qualifier	M an..3	M	+21	**21 = Ordered quantity**
6060	Quantity	M n..15	M	:2	Format n..5 **Order quantity**
6411	Measure unit qualifier	C an..3	O	:TNE'	**Measure unit** **TNE = Metric ton (1000 kg) *** **KGM = Kilogram *** **GRM = Gram *** **LBR = Pound GB, US (0,45359237 kg)** **LTR = Litre (1 dm3) *** **DZN = Dozen**

Comment:

Example:
QTY+21:2:TNE'

Group:	**SG25**	Status: R	Max. Occ.: 10	Line Items	
Segment:	**MOA**	Seq. No.: 16 Status: O	Level: 2 Max. Occ.: 1	**Monetary amount**	

Name: **Line item amount**

Description of segment:

EDIFACT			Application		
Tag	Name	St Format	St	Example	Use / Comments
C516	MONETARY AMOUNT	M	M		
5025	Monetary amount type qualifier	M an..3	M	+203	**203 = Line item amount**
5004	Monetary amount	C n..18	R	:2800'	**Line item amount**

Comment:
This segment contains the amount of the line item (price times quantity).

Example:
MOA+203:2800'

Group:	**SG25**	Status: R	Max. Occ.:	10	Line Items
Group:	**SG27**	Status: O	Max. Occ.:	1	Item price
Segment:	**PRI**	Seq. No.: 17 Status: M	Level: Max. Occ.:	2 1	**Price details**

Name: **Price per item / unit**
Description of segment:

EDIFACT			Application		
Tag	Name	St Format	St	Example	Use / Comments
C509	PRICE INFORMATION	C	R		
5125	Price qualifier	M an..3	M	+AAB	**AAB = Calculation gross**
5118	Price	C n..15	R	:1400	Format n..12 **Unit price**
5375	Price type, coded	C an..3	N		
5387	Price type qualifier	C an..3	O	:CAT	**CAT = Catalog price**
5284	Unit price basis	C n..9	N		
6411	Measure unit qualifier	C an..3	O	:TNE'	**PCE = Piece** **KGM = Kilogram** **LTR = Litre (1 dm3)** **TNE = Metric ton (1000 kg)**

Comment:

Example:
PRI+AAB:1400::CAT::TNE'

Segment: **UNS** Seq. No.: 18 Level: 0 **Section control**
Status: M Max. Occ.: 1

Name: **Section control**
Description of segment:

EDIFACT			Application		
Tag	Name	St Format	St	Example	Use / Comments
0081	Section identification	M a1	M	+S'	**S = Detail/summary section separation**

Comment:

Example:
UNS+S'

Segment: **MOA** Seq. No.: 19 Level: 0 **Monetary amount**
Status: R Max. Occ.: 1

Name: **Total amount**
Description of segment:

EDIFACT				Application	
Tag	Name	St Format	St	Example	Use / Comments
C516	MONETARY AMOUNT	M	M		
5025	Monetary amount type qualifier	M an..3	M	+86	**86 = Message total monetary amount**
5004	Monetary amount	C n..18	R	:2800'	Format n..12 **Total order value**

Comment:

Example:
MOA+86:2800'

Segment: **UNT** Seq. No.: 20 Level: 0 **Message trailer**
Status: M Max. Occ.: 1

Name: **Message trailer**
Description of segment:

EDIFACT				Application	
Tag	Name	St Format	St	Example	Use / Comments
0074	Number of segments in a message	M n..6	M	+20	
0062	Message reference number	M an..14	M	+1'	Unique number of the message assigned by sender; must be equal to the value of DE 0062 in UNH.

Comment:

Example:
UNT+20+1'

A.2 Generated XML structure

A.2.1 XML schema with EDI tags and namespace

NOTE The namespace ‘din’ in the examples of this section is for example purposes only and can either be omitted or any other suitable namespace can be used.

```
<?xml version="1.0" encoding='UTF-8'?>

<!-- automatically generated by GEFEG EDIFIX -->
<!-- http://www.gefeg.com -->

<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
        xmlns:din="http://www.din.de/examples/orders"
        targetNamespace="http://www.din.de/examples/orders">
  <xsd:element name ="M_ORDERS">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="din:D_1004"/>
        <xsd:element ref="din:S_DTM" minOccurs="1" maxOccurs="2"/>
        <xsd:element ref="din:G_SG2" minOccurs="1" maxOccurs="2"/>
        <!-- Alternative could be "G_NAD" -->
        <xsd:element ref="din:D_6345" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:G_SG25" minOccurs="1" maxOccurs="10"/>
        <!-- Alternative could be "G_LIN" -->
        <xsd:element ref="din:D_5004_2"/>
      </xsd:sequence>
      <xsd:attribute name="EDIPath" type="xsd:string" fixed="ORDERS"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="S_DTM">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="din:D_2005"/>
        <xsd:element ref="din:D_2380"/>
      </xsd:sequence>
      <xsd:attribute name="EDIPath" type="xsd:string" fixed="ORDERS.DTM(0030)"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="G_SG2">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="din:D_3035"/>
        <xsd:element ref="din:D_3036"/>
        <xsd:element ref="din:D_3042" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:D_3164" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:D_3251" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:S_FII" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:D_1154" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:D_3413" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:S_COM" minOccurs="0" maxOccurs="2"/>
      </xsd:sequence>
      <xsd:attribute name="EDIPath" type="xsd:string" fixed="ORDERS.SG2(0110)"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="G_SG25">
    <xsd:complexType>
```

```
      <xsd:sequence>
        <xsd:element ref="din:D_1082" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:D_7140"/>
        <xsd:element ref="din:D_7008" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:D_7008_2" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:D_6060" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:D_6411" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:D_5004" minOccurs="0" maxOccurs="1"/>
        <xsd:element ref="din:D_5118" minOccurs="0" maxOccurs="1"/>
      </xsd:sequence>
      <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25(0930)"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="S_FII">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="din:D_3194"/>
        <xsd:element ref="din:D_3433"/>
        <xsd:element ref="din:D_3432" minOccurs="0" maxOccurs="1"/>
      </xsd:sequence>
      <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.FII(0140)"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="S_COM">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="din:D_3148"/>
        <xsd:element ref="din:D_3155"/>
      </xsd:sequence>
      <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.SG5.COM(0230)"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_1004">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:string1..8">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.BGM.1004(0020:020)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_6345">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:D_6345">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG7.CUX.C504.6345(0250:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_5004_2">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:decimal1..12">
```

```
          <xsd:attributename="EDIPath" type="xsd:string"
fixed="ORDERS.MOA.C516.5004(2010:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_2005">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:D_2005">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.DTM.C507.2005(0030:010:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_2380">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:decimal8">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.DTM.C507.2380(0030:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_3035">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:D_3035">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.NAD.3035(0120:010)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_3036">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:string1..10">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.NAD.C080.3036(0120:040:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_3042">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:string1..35">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.NAD.C059.3042(0120:050:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_3164">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:string1..35">
```

```
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.NAD.3164(0120:060)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_3251">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:decimal5">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.NAD.3251(0120:080)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_1154">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:string1..35">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.SG3.RFF.C506.1154(0160:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_3413">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:string1..15">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.SG5.CTA.C056.3413(0220:020:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_3194">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:decimal10">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.FII.C078.3194(0140:020:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_3433">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:decimal8">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.FII.C088.3433(0140:030:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_3432">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:string1..70">
```

```
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.FII.C088.3432(0140:030:07)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_3148">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:string1..12">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.SG5.COM.C076.3148(0230:010:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_3155">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:D_3155">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.SG5.COM.C076.3155(0230:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_1082">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:decimal1..5">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.LIN.1082(0940:010)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_7140">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:string1..10">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.LIN.C212.7140(0940:030:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_7008">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:string1..20">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.IMD.C273.7008(0960:030:04)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_7008_2">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:string1..20">
```

```
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.IMD.C273.7008(0960:030:05)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_6060">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:decimal1..5">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.QTY.C186.6060(0970:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_6411">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:D_6411">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.QTY.C186.6411(0970:010:03)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_5004">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:decimal1..18">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.MOA.C516.5004(0980:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="D_5118">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="din:decimal1..12">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.SG27.PRI.C509.5118(1150:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:simpleType name="string1..8">
    <xsd:restriction base="xsd:string">
      <xsd:whiteSpace value="preserve"/>
      <xsd:minLength value="1"/>
      <xsd:maxLength value="8"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="D_2005">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="4"/>
      <xsd:enumeration value="2"/>
      <xsd:whiteSpace value="preserve"/>
      <xsd:minLength value="1"/>
      <xsd:maxLength value="3"/>
```

```
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="decimal8">
  <xsd:restriction base="xsd:decimal">
    <xsd:totalDigits value="8"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="D_3035">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="BY"/>
    <xsd:enumeration value="SE"/>
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="3"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="string1..10">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="10"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="string1..35">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="35"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="decimal5">
  <xsd:restriction base="xsd:decimal">
    <xsd:totalDigits value="5"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="decimal10">
  <xsd:restriction base="xsd:decimal">
    <xsd:totalDigits value="10"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="string1..70">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="70"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="string1..15">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="15"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="string1..12">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="12"/>
  </xsd:restriction>
```

```
  </xsd:simpleType>
  <xsd:simpleType name="D_3155">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="TE"/>
      <xsd:enumeration value="FX"/>
      <xsd:whiteSpace value="preserve"/>
      <xsd:minLength value="1"/>
      <xsd:maxLength value="3"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="D_6345">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="DEM"/>
      <xsd:enumeration value="GBP"/>
      <xsd:whiteSpace value="preserve"/>
      <xsd:minLength value="1"/>
      <xsd:maxLength value="3"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="decimal1..5">
    <xsd:restriction base="xsd:decimal">
      <xsd:totalDigits value="5"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="string1..20">
    <xsd:restriction base="xsd:string">
      <xsd:whiteSpace value="preserve"/>
      <xsd:minLength value="1"/>
      <xsd:maxLength value="20"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="D_6411">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="TNE"/>
      <xsd:enumeration value="KGM"/>
      <xsd:enumeration value="GRM"/>
      <xsd:enumeration value="LBR"/>
      <xsd:enumeration value="LTR"/>
      <xsd:enumeration value="DZN"/>
      <xsd:whiteSpace value="preserve"/>
      <xsd:minLength value="1"/>
      <xsd:maxLength value="3"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="decimal1..18">
    <xsd:restriction base="xsd:decimal">
      <xsd:totalDigits value="18"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="decimal1..12">
    <xsd:restriction base="xsd:decimal">
      <xsd:totalDigits value="12"/>
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>
```

Example XML message for the above described schema:

```
<?xml version="1.0" encoding='UTF-8'?>

<!-- automatically generated by GEFEG EDIFIX -->
<!-- http://www.gefeg.com -->

<din:M_ORDERS xmlns:din="http://www.din.de/examples/orders"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.din.de/examples/orders order1.xsd">
  <din:D_1004>1-96</din:D_1004>
  <din:S_DTM>
    <din:D_2005>4</din:D_2005>
    <din:D_2380>19960101</din:D_2380>
  </din:S_DTM>
  <din:G_SG2>
    <din:D_3035>BY</din:D_3035>
    <din:D_3036>BONBON AG</din:D_3036>
    <din:D_3042>SIRUPSTRASSE 15</din:D_3042>
    <din:D_3164>ZUCKERSTADT</din:D_3164>
    <din:D_3251>55555</din:D_3251>
    <din:S_FII>
      <din:D_3194>1236547890</din:D_3194>
      <din:D_3433>10090045</din:D_3433>
      <din:D_3432>SBANK</din:D_3432>
    </din:S_FII>
    <din:D_1154>DE998887</din:D_1154>
    <din:D_3413>BART SIMPSON</din:D_3413>
    <din:S_COM>
      <din:D_3148>05368-22347</din:D_3148>
      <din:D_3155>TE</din:D_3155>
    </din:S_COM>
  </din:G_SG2>
  <din:D_6345>EUR</din:D_6345>
  <din:G_SG25>
    <din:D_1082>1</din:D_1082>
    <din:D_7140>2001</din:D_7140>
    <din:D_7008>SCHOKOLADENMASSE</din:D_7008>
    <din:D_6060>2</din:D_6060>
    <din:D_6411>TNE</din:D_6411>
    <din:D_5004>2800</din:D_5004>
    <din:D_5118>1400</din:D_5118>
  </din:G_SG25>
  <din:D_5004_2>2890</din:D_5004_2>
</din:M_ORDERS>
```

A.2.2 Alternative XML schema with "speaking" tags

```
<?xml version="1.0" encoding='UTF-8'?>

<!-- automatically generated by GEFEG EDIFIX -->
<!-- http://www.gefeg.com -->

<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:element name ="Order">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="OrderNumber"/>
```

```
      <xsd:element ref="OrderDates" minOccurs="1" maxOccurs="2"/>
      <xsd:element ref="OrderParties" minOccurs="1" maxOccurs="2"/>
      <xsd:element ref="OrderCurreny" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="LineItems" minOccurs="1" maxOccurs="10"/>
      <xsd:element ref="TotalOrderValue"/>
    </xsd:sequence>
    <xsd:attribute name="EDIPath" type="xsd:string" fixed="ORDERS"/>
  </xsd:complexType>
</xsd:element>
<xsd:element name ="OrderDates">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="DateQualifier"/>
      <xsd:element ref="Date"/>
    </xsd:sequence>
    <xsd:attribute name="EDIPath" type="xsd:string"
     fixed="ORDERS.DTM(0030)"/>
  </xsd:complexType>
</xsd:element>
<xsd:element name ="OrderParties">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="PartyQualifier"/>
      <xsd:element ref="Name"/>
      <xsd:element ref="Street" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="City" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="PostCode" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="AccountInformation" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="VATNumber" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="ContactName" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="Communication" minOccurs="0" maxOccurs="2"/>
    </xsd:sequence>
    <xsd:attribute name="EDIPath" type="xsd:string"
     fixed="ORDERS.SG2(0110)"/>
  </xsd:complexType>
</xsd:element>
<xsd:element name ="LineItems">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="LineItemNumber" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="SuppliersArticleNumber"/>
      <xsd:element ref="ItemTextLine1" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="ItemTextLine2" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="QuantityOrdered" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="MeasureUnit" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="LineItemAmount" minOccurs="0" maxOccurs="1"/>
      <xsd:element ref="UnitPrice" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="EDIPath" type="xsd:string"
     fixed="ORDERS.SG25(0930)"/>
  </xsd:complexType>
</xsd:element>
<xsd:element name ="AccountInformation">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="AccountNumber"/>
      <xsd:element ref="BIC"/>
      <xsd:element ref="BankName" minOccurs="0" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="EDIPath" type="xsd:string"
```

```
       fixed="ORDERS.SG2.FII(0140)"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="Communication">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="CommunicationNumber"/>
        <xsd:element ref="CommunicationChannel"/>
      </xsd:sequence>
      <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.SG5.COM(0230)"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="OrderNumber">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..8">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.BGM.1004(0020:020)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="OrderCurreny">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="OrderCurreny">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG7.CUX.C504.6345(0250:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="TotalOrderValue">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="decimal1..12">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.MOA.C516.5004(2010:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="DateQualifier">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="DateQualifier">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.DTM.C507.2005(0030:010:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="Date">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="decimal8">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.DTM.C507.2380(0030:010:02)"/>
        </xsd:extension>
```

```
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="PartyQualifier">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="PartyQualifier">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.NAD.3035(0120:010)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="Name">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..10">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.NAD.C080.3036(0120:040:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="Street">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..35">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.NAD.C059.3042(0120:050:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="City">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..35">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.NAD.3164(0120:060)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="PostCode">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="decimal5">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.NAD.3251(0120:080)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="VATNumber">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..35">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.SG3.RFF.C506.1154(0160:010:02)"/>
        </xsd:extension>
```

```
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="ContactName">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..15">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.SG5.CTA.C056.3413(0220:020:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="AccountNumber">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="decimal10">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.FII.C078.3194(0140:020:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="BIC">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="decimal8">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.FII.C088.3433(0140:030:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="BankName">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..70">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.FII.C088.3432(0140:030:07)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="CommunicationNumber">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..12">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.SG5.COM.C076.3148(0230:010:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="CommunicationChannel">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="CommunicationChannel">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG2.SG5.COM.C076.3155(0230:010:02)"/>
        </xsd:extension>
```

```
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="LineItemNumber">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="decimal1..5">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.LIN.1082(0940:010)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="SuppliersArticleNumber">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..10">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.LIN.C212.7140(0940:030:01)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="ItemTextLine1">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..20">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.IMD.C273.7008(0960:030:04)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="ItemTextLine2">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="string1..20">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.IMD.C273.7008(0960:030:05)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="QuantityOrdered">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="decimal1..5">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.QTY.C186.6060(0970:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="MeasureUnit">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="MeasureUnit">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.QTY.C186.6411(0970:010:03)"/>
        </xsd:extension>
```

```
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="LineItemAmount">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="decimal1..18">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.MOA.C516.5004(0980:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name ="UnitPrice">
    <xsd:complexType>
      <xsd:simpleContent>
        <xsd:extension base ="decimal1..12">
          <xsd:attribute name="EDIPath" type="xsd:string"
fixed="ORDERS.SG25.SG27.PRI.C509.5118(1150:010:02)"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
  </xsd:element>
  <xsd:simpleType name="string1..8">
    <xsd:restriction base="xsd:string">
      <xsd:whiteSpace value="preserve"/>
      <xsd:minLength value="1"/>
      <xsd:maxLength value="8"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="DateQualifier">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="4"/>
      <xsd:enumeration value="2"/>
      <xsd:whiteSpace value="preserve"/>
      <xsd:minLength value="1"/>
      <xsd:maxLength value="3"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="decimal8">
    <xsd:restriction base="xsd:decimal">
      <xsd:totalDigits value="8"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="PartyQualifier">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="BY"/>
      <xsd:enumeration value="SE"/>
      <xsd:whiteSpace value="preserve"/>
      <xsd:minLength value="1"/>
      <xsd:maxLength value="3"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="string1..10">
    <xsd:restriction base="xsd:string">
      <xsd:whiteSpace value="preserve"/>
      <xsd:minLength value="1"/>
      <xsd:maxLength value="10"/>
    </xsd:restriction>
  </xsd:simpleType>
```

```
<xsd:simpleType name="string1..35">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="35"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="decimal5">
  <xsd:restriction base="xsd:decimal">
    <xsd:totalDigits value="5"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="decimal10">
  <xsd:restriction base="xsd:decimal">
    <xsd:totalDigits value="10"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="string1..70">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="70"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="string1..15">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="15"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="string1..12">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="12"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="CommunicationChannel">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="TE"/>
    <xsd:enumeration value="FX"/>
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="3"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="decimal1..5">
  <xsd:restriction base="xsd:decimal">
    <xsd:totalDigits value="5"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="string1..20">
  <xsd:restriction base="xsd:string">
    <xsd:whiteSpace value="preserve"/>
    <xsd:minLength value="1"/>
    <xsd:maxLength value="20"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="MeasureUnit">
```

```
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="TNE"/>
      <xsd:enumeration value="KGM"/>
      <xsd:enumeration value="GRM"/>
      <xsd:enumeration value="LBR"/>
      <xsd:enumeration value="LTR"/>
      <xsd:enumeration value="DZN"/>
      <xsd:whiteSpace value="preserve"/>
      <xsd:minLength value="1"/>
      <xsd:maxLength value="3"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="decimal1..18">
    <xsd:restriction base="xsd:decimal">
      <xsd:totalDigits value="18"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="decimal1..12">
    <xsd:restriction base="xsd:decimal">
      <xsd:totalDigits value="12"/>
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>
```

Example XML message for the above described schema:

```
<?xml version="1.0" encoding='UTF-8'?>

<!-- automatically generated by GEFEG EDIFIX -->
<!-- http://www.gefeg.com -->

<Order
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:noNamespaceSchemaLocation="order1.xsd">
  <OrderNumber>1-96</OrderNumber>
  <OrderDates>
    <DateQualifier>4</DateQualifier>
    <Date>19960101</Date>
  </OrderDates>
  <OrderParties>
    <PartyQualifier>BY</PartyQualifier>
    <Name>BONBON AG</Name>
    <Street>SIRUPSTRASSE 15</Street>
    <City>ZUCKERSTADT</City>
    <PostCode>55555</PostCode>
    <AccountInformation>
      <AccountNumber>1236547890</AccountNumber>
      <BIC>10090045</BIC>
      <BankName>SBANK</BankName>
    </AccountInformation>
    <VATNumber>DE998887</VATNumber>
    <ContactName>BART SIMPSON</ContactName>
    <Communication>
      <CommunicationNumber>05368-22347</CommunicationNumber>
      <CommunicationChannel>TE</CommunicationChannel>
    </Communication>
  </OrderParties>
  <OrderCurreny>EUR</OrderCurreny>
```

```
  <LineItems>
    <LineItemNumber>1</LineItemNumber>
    <SuppliersArticleNumber>2001</SuppliersArticleNumber>
    <ItemTextLine1>SCHOKOLADENMASSE</ItemTextLine1>
    <QuantityOrdered>2</QuantityOrdered>
    <MeasureUnit>TNE</MeasureUnit>
    <LineItemAmount>2800</LineItemAmount>
    <UnitPrice>1400</UnitPrice>
  </LineItems>
  <TotalOrderValue>2890</TotalOrderValue>
</Order>
```

References

ISO 8879, *Information processing — Text and office systems — Standard Generalized Markup Language (SGML).*

ISO/TS 16668, *Basic Semantics Register (BSR).*

XML Schema – *Part 1: Structures,* http://www.w3.org/TR/2001/REC-xmlschema-1-20010502.

XML Schema – *Part 2: Datatypes,* http://www.w3.org/TR/2001/REC-xmlschema-2-20010502.

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