XRechnung

Koordinierungsstelle
für IT-Standards

English Summary of XRechnung and Peppol in Germany

Version 2.2.0 (July 2022)

Akte	Unser Zeichen	Datum
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1. Introduction to XRechnung in the context of Electronic Invoicing in Germany

This informative document provides a comprehensive overview of XRechnung and electronic invoicing (eInvoicing) with public authorities in Germany. This is not a normative document for XRechnung, neither is it a legal framework for electronic invoicing in Germany. Normative and legal references are given where appropriate. This document refers to the latest XRechnung version 2.2.0 (published on 2022-01-27).

1.1. eInvoicing in Germany with public authorities

Based on the directive 2014/55/EU on electronic invoicing in public procurement, Germany developed the Core Invoice Usage Specification (CIUS) XRechnung. It is compliant to EN 16931 and meets German legal requirements. In June 2020, the Extension XRechnung was published to meet additional national requirements. The Extension XRechnung is conformant to EN 16931. Altogether, XRechnung is designed for, but not limited to, electronic invoicing with the German public authorities.

As part of the implementation of the Directive 2014/55/EU on electronic invoicing in public procurement in Germany, the National IT Planning Council[1] has made the following decisions (valid from 18th April 2020 onwards):

1. Public authorities in Germany have to accept and process XRechnung invoices.

2. Public authorities in Germany have to be reachable via the Peppol network if they offer a web service for electronic invoices.

3. The Coordination Office for IT Standards (KoSIT) is responsible for maintaining and publishing the CIUS XRechnung

1.2. XRechnung and Peppol

The specification XRechnung is currently only available in German, but XRechnung as a CIUS is based on and compliant to EN 16931-1, which is available in English. The supporting software components for XRechnung are documented in English and are published on https://github.com/itplr-kosit. English speaking support is given at xrechnung@finanzen.bremen.de. This informative document provides a comprehensive overview of XRechnung and describes where XRechnung fits in within the EN 16931-1 recommendations more precisely with regards to German law (for details please refer to the technical annex).

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[1] The State Treaty on IT establishing the IT Planning Council lays the groundwork for cooperation on the use of information technology in federal and state public administration (Article 91c of the Basic Law, State Treaty on IT). The IT Planning Council is the central body responsible for National IT cooperation. The amendment gave the Federal Government exclusive authority to pass legislation concerning a core network for federal and state public administration.

The use of Peppol[2] within Germany focuses on the use of Peppol eDelivery and not on the use of BIS Billing 3.0, as the national standard is XRechnung. XRechnung is a valid document for the Peppol network. Please find a document identifier for XRechnung in the valid code list[3].

Like XRechnung, Peppol BIS Billing 3.0 is based on CIUS and compliant to EN 16931-1.

In order to guarantee international interoperability within the Peppol network, public authorities in Germany that are reachable via Peppol are able to process Peppol BIS Billing 3.0. Peppol BIS Billing 3.0 is therefore accepted for submitting electronic invoices from outside Germany to German public authorities.

Keep in mind that there is no national ruleset for Peppol BIS Billing 3.0 as yet. In addition to the validator configuration for XRechnung, KoSIT also provides a validator configuration for Peppol BIS Billing 3.0 at https://github.com/itplr-kosit.

Both document-types, Peppol BIS Billing 3.0 as well as XRechnung, may be used within Germany to send invoices from business to business (B2B).

1.3. Peppol Authority in Germany

KoSIT is the German Peppol Authority. It is located within the e-government division of the core administration of the federal state Free Hanseatic City of Bremen, and is a permanent organisation of the National IT Planning Council. English speaking support is given at peppol@finanzen.bremen.de.

Please contact peppol@finanzen.bremen.de, if more information about the use of Peppol in Germany including the national specific requirements is needed.

1.4. Good to know

XRechnung has a defined release cycle with a fixed transition period. New normative versions may be released on 31st July (summer release) and 31st Jan (winter release) each year. There is a transition period of 6 months between the release of a new version of XRechnung and it coming into force. Between the normative releases, technical bug fix updates may be published, usually in (European) spring and autumn, but with no fixed release date.

New versions of XRechnung are published on the KoSIT website (http://www.xoev.de/de/xrechnung) and through the Bundesanzeiger, an official journal for federal agencies in Germany. Currently, there are two versions available:

- XRechnung 2.1.1 (CIUS and Extension): currently in force and should be used until 31.07.2022
- XRechnung 2.2.0 (CIUS and Extension) published 27.01.2022 and comes into force / should be used from 01.08.2022 onwards

Due to federal structures in Germany, local regulations may vary from those at federal level, e.g. on submission details, thresholds or obligation to submit electronic invoices. KoSIT offers an overview (in German) on local regulations, including contact information

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[2] See www.peppol.org. In addition, see also some English information on the German website Peppol - Koordinierungsstelle für IT-Standards (xoev.de) or contact peppol@finanzen.bremen.de.

[3] *Please find the valid document identifier in the latest code list at* *https://docs.peppol.eu/edelivery/codelists/.*

(http://www.xoev.de/de/xrechnung). We also recommend contacting the contracting authorities.

2. Technical annex

2.1. CIUS XRechnung in detail

The CIUS XRechnung supports the information elements and business rules as defined in EN 16931-1. It also supports both XML syntaxes, Universal Business Language (UBL) and CII.

In addition to EN 16931-1 the following national business rules are defined:

Rule	Message (German)	Message (English)
BR-DE-1	Eine Rechnung (INVOICE) muss Angaben zu „PAYMENT INSTRUCTIONS" (BG-16) enthalten.	For German suppliers, an invoice shall contain information on "PAYMENT INTSTRUCTIONS" (BG-16).
BR-DE-2	Die Gruppe „SELLER CONTACT" (BG-6) muss übermittelt werden.	For German suppliers, the group "SELLER CONTACT" (BG-6) shall be provided.
BR-DE-3	Das Element „Seller city" (BT-37) muss übermittelt werden.	For German suppliers, the element "seller city" (BT-37) shall be provided.
BR-DE-4	Das Element „Seller post code" (BT-38) muss übermittelt werden.	For German suppliers, the element "Seller post code" (BT-38) shall be provided.
BR-DE-5	Das Element „Seller contact point" (BT-41) muss übermittelt werden.	For German suppliers, the element "Seller contact point" (BT-41) shall be provided.
BR-DE-6	Das Element „Seller contact telephone number" (BT-42) muss übermittelt werden.	For German suppliers, the element "Seller contact telephone number" (BT-42) shall be provided.
BR-DE-7	Das Element „Seller contact email address" (BT-43) muss übermittelt werden.	For German suppliers, the element "Seller contact email address" (BT-43) shall be provided.
BR-DE-8	Das Element „Buyer city" (BT-52) muss übermittelt werden.	For German suppliers, the element "Buyer city" (BT-52) shall be provided.
BR-DE-9	Das Element „Buyer post code" (BT-53) muss übermittelt werden.	For German suppliers, the element "Buyer post code" (BT-53) shall be provided.
BR-DE-10	Das Element „Deliver to city" (BT-77) muss übermittelt werden, wenn die Gruppe „DELIVER TO ADDRESS" (BG-15) übermittelt wird.	For German suppliers, the element "Deliver to city" (BT-77) shall be provided if the Group „DELIVER TO ADDRESS" (BG-15) is delivered.

BR-DE-11	Das Element „Deliver to post code" (BT-78) muss übermittelt werden, wenn die Gruppe „DELIVER TO ADDRESS" (BG-15) übermittelt wird.	For German suppliers, the element „Deliver to post code" (BT-78) shall be provided if the Group „DELIVER TO ADDRESS" (BG-15) is delivered.
BR-DE-12	Mit dem Element „Deliver to post code" (BT-78) muss eine Postleitzahl übermittelt werden.	For German suppliers, the element "Deliver to post code" (BT-78) shall contain a German postal code.
BR-DE-13 (deprecated with version 2.1.0)	~~In der Rechnung müssen Angaben zu genau einer der drei Gruppen „CREDIT TRANSFER" (BG-17), „PAYMENT CARD INFORMATION" (BG-18) oder „DIRECT DEBIT" (BG-19) übermittelt werden.~~	~~For German suppliers, an invoice shall contain information either on „CREDIT TRANSFER" (BG-17) or „PAYMENT CARD INFORMATION" (BG-18) or „DIRECT DEBIT" (BG-19).~~
BR-DE-14	Das Element „VAT category rate" (BT-119) muss übermittelt werden.	For German suppliers, the element "VAT category rate " (BT-119) shall be provided.
BR-DE-15	Das Element „Buyer reference" (BT-10) muss übermittelt werden.	For German suppliers, the element "Buyer reference" (BT-10) shall be provided.
BR-DE-16	Wenn in einer Rechnung die Steuercodes S, Z, E, AE, K, G, L oder M verwendet werden, muss mindestens eines der Elemente „Seller VAT identifier" (BT-31), „Seller tax registration identifier" (BT-32) oder „SELLER TAX REPRESENTATIVE PARTY" (BG-11) übermittelt werden.	For German suppliers, if one of the VAT codes S, Z, E, AE, K, G, L, or M is used, an invoice shall contain at least one of the following elements: "Seller VAT identifier" (BT-31) or "Seller tax registration identifier" (BT-32) or "SELLER TAX REPRESENTATIVE PARTY" (BG-11).
BR-DE-17	Mit dem Element „Invoice type code" (BT-3) sollen ausschließlich folgende Codes aus der Codeliste UNTDID 1001 übermittelt werden: • 326 (Partial invoice) • 380 (Commercial invoice) • 384 (Corrected invoice) • 389 (Self-billed invoice) • 381 (Credit note) • 875 (Partial construction invoice) • 876 (Partial final construction invoice) • 877 (Final construction invoice)	For German suppliers, the element "Invoice type code" (BT-3) should only contain the following values from code list UNTDID 1001: • 326 (Partial invoice) • 380 (Commercial invoice) • 384 (Corrected invoice) • 389 (Self-billed invoice) • 381 (Credit note) • 875 (Partial construction invoice) • 876 (Partial final construction invoice) • 877 (Final construction invoice)

BR-DE-18	Die Informationen zur Gewährung von Skonto oder zur Berechnung von Verzugszinsen müssen wie folgt im Element „Payment terms" (BT-20) übermittelt werden:	For German suppliers, information on cash discounts for prompt payment (Skonto) or default charges (Verzugszinsen) shall be provided within the element "Payment terms" BT-20 in the following way:
	Anzugeben ist im ersten Segment „SKONTO" oder „VERZUG", im zweiten „TAGE=n", im dritten „PROZENT=n". Prozentzahlen sind ohne Vorzeichen sowie mit Punkt getrennt von zwei Nachkommastellen anzugeben.	First segment "SKONTO" or "VERZUG", second segment amount of days ("TAGE=N"), third segment percentage ("PROZENT=N"). Percentage must be separated by dot with two decimal places.
	Liegt dem zu berechnenden Betrag nicht BT-115, „fälliger Betrag" zugrunde, sondern nur ein Teil des fälligen Betrags der Rechnung, ist der Grundwert zur Berechnung von Skonto oder Verzugszins als viertes Segment „BASISBETRAG=n" gemäß dem semantischen Datentypen Amount anzugeben.	In case the base value of the invoiced amount is not provided in BT-115 but as a partial amount, the base value shall be provided as fourth segment "BASISBETRAG=N" as semantic data type amount.
	Jeder Eintrag beginnt mit einer #, die Segmente sind mit einer # getrennt und eine Zeile schließt mit einer # ab. Am Ende einer vollständigen Skonto- oder Verzugsangabe muss ein XML-konformer Zeilenumbruch folgen.	Each entry shall start with a #, the segments must be separated by # and a row shall end with a #. A complete statement on cash discount for prompt payment or default charges shall end with a XML-conformant line break. All statements on cash discount for prompt payment or default charges shall be given in capital letters. Additional whitespaces (blanks, tabulators or line breaks) are not allowed. Other characters or texts than defined above are not allowed.
	Alle Angaben zur Gewährung von Skonto oder zur Berechnung von Verzugszinsen müssen in Großbuchstaben gemacht werden. Zusätzliches Whitespace (Leerzeichen, Tabulatoren oder Zeilenumbrüche) ist nicht zulässig. Andere Zeichen oder Texte als in den oberen Vorgaben genannt sind nicht zulässig.	
BR-DE-19	„Payment account identifier" (BT-84) soll eine korrekte IBAN enthalten, wenn in „Payment means type code" (BT-81) mit dem Code 58 SEPA als Zahlungsmittel gefordert wird.	For German suppliers, the element „Payment account identifier" (BT-84) should contain a valid IBAN if code 58 SEPA is provided in „Payment means type code" (BT-81).
BR-DE-20	„Debited account identifier" (BT-91) soll eine korrekte IBAN enthalten, wenn in „Payment means type code" (BT-81) mit dem Code 59 SEPA als Zahlungsmittel gefordert wird.	For German suppliers, the element „Debited account identifier" (BT-91) should contain a valid IBAN if code 59 SEPA is provided in „Payment means type code" (BT-81).

BR-DE-21	Das Element „Specification identifier" (BT-24) soll syntaktisch der Kennung des Standards XRechnung entsprechen.	For German suppliers, the element „„Specification identifier" (BT-24) should Syntactically be equal to the identifier given with the Standard XRechnung.
BR-DE-22	Die in einer eingereichten Rechnung angehängten Dokumente in „ADDITIONAL SUPPORTING DOCUMENTS" (BG-24) müssen im Element „Attached document" (BT-125) einen eindeutigen Dateinamen haben (nicht case-sensitiv).	Attached documents, provided with an invoice in "ADDITIONAL SUPPORTING DOCUMENTS" (BG-24), shall have a unique filename (non case-sensitive) within the element "Attached document" (BT-125).
BR-DE-23	Wenn „Payment means type code" (BT-81) einen Schlüssel für Überweisungen enthält (30, 58), muss „CREDIT TRANSFER" (BG-17) übermittelt werden. BG-18 und BG-19 dürfen in diesem Fall nicht übermittelt werden	If „Payment means type code" (BT-81) contains a code for credit transfer (30, 58), „CREDIT TRANSFER" (BG-17) shall be provided. In this case, BG-18 and BG-19 shall not be provided.
BR-DE-24	Wenn „Payment means type code" (BT-81) einen Schlüssel für Kartenzahlungen enthält (48, 54, 55), muss genau „PAYMENT CARD INFORMATION" (BG-18) übermittelt werden. BG-17 und BG-19 dürfen in diesem Fall nicht übermittelt werden.	If „Payment means type code" (BT-81) contains a code for payment card (48, 54, 55), „PAYMENT CARD INFORMATION" (BG-18) shall be provided. In this case, BG-17 and BG-19 shall not be provided.
BR-DE-25	Wenn „Payment means type code" (BT-81) type code einen Schlüssel für Lastschriften enthält (59), muss genau „DIRECT DEBIT" (BG-19) übermittelt werden. BG-17 und BG-18 dürfen in diesem Fall nicht übermittelt werden.	If „Payment means type code" (BT-81) contains a code for direct debit (59), „DIRECT DEBIT" (BG-19) shall be provided. In this case, BG-17 and BG-18 shall not be provided.
BR-DE-26	Wenn im Element „Invoice type code" (BT-3) der Code 384 (Corrected invoice) übergeben wird, soll „PRECEDING INVOICE REFERENCE" (BG-3) mind. einmal vorhanden sein.	If „Invoice type code" (BT-3) contains the code 384 (Corrected invoice), „PRECEDING INVOICE REFERENCE" (BG-3) shall be provided at least once.
BR-DE-27	Mit dem Element „Seller contact telephone number" (BT-42) soll eine gültige Telefonnummer übermittelt werden. Eine gültige Telefonnummer soll mindestens drei Ziffern enthalten.	„Seller contact telephone number" (BT-42) should contain a valid telephone number. A valid telephone should consists of 3 digits minimum.

BR-DE-28	Mit dem Element „Seller contact email address" (BT-43) soll eine gültige E-Mail-Adresse übermittelt werden. Fußnote: Technische Details der Umsetzung sind in der XRechnung Schematron Regel BR-DE-28 zu finden.	„Seller contact email address" (BT-43) should contain a valid email address. Footnote: Technical details for implementation can be found in XRechnung Schematron Rule BR-DE-28.

Some additional remarks are available for the following information elements, which are not part of EN 16931-1 but may be helpful for using XRechnung (listed in order of appearance in the document Specification XRechnung):

- BT-10 Buyer reference: The Leitweg-ID is an identifier developed to address public entities in Germany and may be used within XRechnung. KoSIT does not provide any Leitweg-ID from German public authorities. Public authorities themselves should provide the Leitweg-ID to the issuers of electronic invoices.
- BT-20 Payment terms: BT-20 may be used to provide information on cash discount for prompt payment (de: Skonto) or default charges (de: Verzugszinsen) in a structured manner. In addition, unstructured information may also be provided (see BR-DE-18 for technical details).
- BG-24 ADDITIONAL SUPPORTING DOCUMENTS and BT-125 Attached document|Attached document/Attached document Filename: Attached documents, provided with an invoice in BG-24 ADDITIONAL SUPPORTING DOCUMENTS shall have a unique filename (non case-sensitive) within the element "Attached document/Attached document Filename" BT-125. The file extension is part of the validation process.
- BT-24 Specification identifier: Conformance to the Standard XRechnung is given with the identifier of the valid version
  - For Standard XRechnung 2.1 (from 01.02.2022 until 31.07.2022): urn:cen.eu:en16931:2017#compliant#urn:xoev-de:kosit:standard:xrechnung_2.1
  - For Standard XRechnung 2.2 (from 01.08.2022 until deprecation): urn:cen.eu:en16931:2017#compliant#urn:xoev-de:kosit:standard:xrechnung_2.2

2.2. Extension XRechnung in detail

The Extension XRechnung was published on 30 July 2020. The main incentive for the Extension is to support invoices within the construction sector. However, the Extension XRechnung is a country-specific extension not limited to a specific domain or business sector. The Extension XRechnung may be used from 01 January 2021 on.

Conformance to the Extension XRechnung in "Specification identifier" BT-24 is given with the identifier of the valid version:

- For Extension XRechnung (from 01.02.2022 until 31.07.2022): urn:cen.eu:en16931:2017#compliant#urn:xoevde:kosit:standard:xrechnung_2.1#conformant#urn:xoev-de:kosit:extension:xrechnung_2.1
- For Extension XRechnung (from 01.08.2022 until deprecation): urn:cen.eu:en16931:2017#compliant#urn:xoevde:kosit:standard:xrechnung_2.2#conformant#urn:xoev-de:kosit:extension:xrechnung_2.2

Extension XRechnung includes the following features:

- Sub invoice lines (see chap. 2.2.1)

- Embedded attachments with file type XML: XML documents may be attached as embedded documents within an electronic invoice using Extension XRechnung (see rule BR-DEX-01)

- Additional entries to ISO 6523 ICD code list and Electronic Address Scheme (EAS) (see chap. 2.2.3)

2.2.1. Sub Invoice Lines

Support of sub invoice lines: the recursive business group BG-DEX-01 sub invoice line is defined as element for the BG-25 INVOICE LINE. Within BG-DEX-01 six other BGs are defined, which mirror the BGs from BG-25:

- BG-DEX-02 SUB INVOICE ITEM INFORMATION
- BG-DEX-03 SUB INVOICE LINE ALLOWANCES
- BG-DEX-04 SUB INVOICE LINE CHARGES
- BG-DEX-05 SUB INVOICE LINE PERIOD
- BG-DEX-06 SUB INVOICE VAT INFORMATION
- BG-DEX-07 SUB INVOICE PRICE DETAILS

2.2.2. Additional Extension XRechnung business rules

Extension XRechnung defines the following business rules:

Rule	Message (German)	Message (English)	Information element
BR-DEX-01	Wenn die Möglichkeit einer Extension genutzt wird, darf zusätzlich zu der Liste der mime codes (definiert in Abschnitt 8.2, „Binary Object") der mime code application/xml genutzt werden. Fußnote: Sofern das Binärobjekt vom Typ XML ist, darf das angehängte XML keine Elemente beinhalten, welche wiederum ein eigenständiges XML-Dokument beinhaltet. Rechnungssteller und Rechnungs-empfänger sollten sich zur Sicher-stellung der Verarbeitung bzgl. des zu nutzenden XML vorab abstimmen.	When using Extension XRechnung, the MIME code application/xml may be used in addition the mime codes defined in sec. 8.2 "Binary Object". Footnote: If the binary object is an XML document, the attached XML shall not contain any elements with further XML documents. Invoice issuer and invoice receiver should clarify the usage of the embedded XML documents before using them.	BT-125
BR-DEX-02	Der Wert von „Invoice line net amount" (BT-131) einer „INVOICE LINE" (BG-25) oder einer „SUB INVOICE LINE" (BG-DEX-01) soll der Summe der „Invoice line net amount" (BT-131) der direkt darunterliegenden „SUB INVOICE LINE" (BG-DEX-01) entsprechen.	The value of „Invoice line net amount" (BT-131) of an "INVOICE LINE" (BG-25) or a "SUB INVOICE LINE" (BG-DEX-01) should be the sum of all „Invoice line net amount" (BT-131)" of all „SUB INVOICE LINE" (BG-DEX-01) below.	BT-131

2.2.3. Code lists

An extension may define additional entries to existing code lists. Extension XRechnung extends the following code list by the mentioned entries.

2.2.3.1. ISO 6523 ICD code list

Code	Scheme name	description
XR01	DiGAVEID	eindeutiges Kennzeichen für eine Verordnungseinheit einer digitalen Gesundheitsanwendung (DiGA) nach Paragraph 139e SGB V
XR02	Freischaltcode	digitaler Gutschein für die Nutzung einer digitale Gesundheitsanwendung (DiGA) nach Paragraph 139e SGB V
XR03	IK	eindeutiges Kennzeichen für einen Leistungserbringer nach Paragraph 293 SGB V

2.2.3.2. Electronic Address Scheme (EAS)

Code	Scheme name	description
XR01	DiGAVEID	eindeutiges Kennzeichen für eine Verordnungseinheit einer digitalen Gesundheitsanwendung (DiGA) nach Paragraph 139e SGB V
XR02	Freischaltcode	digitaler Gutschein für die Nutzung einer digitale Gesundheitsanwendung (DiGA) nach Paragraph 139e SGB V
XR03	IK	eindeutiges Kennzeichen für einen Leistungserbringer nach Paragraph 293 SGB V

2.2.4. Additional implementation remarks

As Extension XRechnung introduces new information elements, which are not part of the core semantic data model defined in EN 16931-1 and therefore not part of the syntax bindings defined in EN 16931-3-n, KoSIT published a separate syntax binding for the Extension XRechnung.

Currently, only a syntax binding for UBL Invoice is provided, UBL Credit Note is not supported. A syntax binding for CII is in planning. Nevertheless, Extension XRechnung features can be used with CII if they do not require the information elements that were added with the extension. These features are:

- Embedded attachments with file type XML

- Additional entries to ISO 6523 ICD code list and Electronic Address Scheme (EAS)