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English version

E-invoices and digital signatures

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Foreword

This CWA is part of a set of CWAs which has been prepared by the CEN/ISSS Workshop on Interoperability of Electronic Invoices in the European Community, with the view to supporting the effective implementation of the related Council Directive 2001/115/EC of 20 December 2001, with a view to simplifying, modernising and harmonising the conditions laid down for invoicing in respect of Value Added Tax, as well as regulations on electronic signatures and EDI. The set of CWA is as follows:

- Commission Recommendation 1994/820/EC October 1994, proposed revision with the requirements of Directive 2001/115/EC, present day e-Commerce practices and revised definition of EDI Electronic Data Interchange
- The list of invoice content details expressed as UN/CEFACT Core Components
- Recommendation to allow coded identifiers as an alternative to the current unstructured clear text identifications.
- A standardised set of codes with definitions to replace plain text clauses in eInvoice messages.
- Survey of VAT Data Element usage in the Member States and the use of codes for VAT Exemptions.
- eInvoices and digital signatures.
- Storage of Electronic Invoices.
- Guidelines for e-Invoicing service providers.
- eInvoice Reference Model for EU VAT purposes specification

An executive summary of these CWAs is available at:

ftp://ftp.cenorm.be/PUBLIC/e-Invoicing/CWA/Executive_Summary.doc

This CWA summarizes findings and issues identified by the e-Invoicing Focus Group set up by CEN/ISSS regarding electronic invoicing using electronic signatures. Issues surrounding electronic signatures relating to e-Invoicing and VAT in relation to the Council Directive 2001/115/EC are covered, which had to be implemented by Member States by 1st January 2004. Council Directive 2001/115/EC, details the requirements on taxable persons and their service providers to guarantee the integrity and the authenticity of electronic invoices for VAT purposes.

Electronic signatures are a valuable technique to ensure the integrity and authenticity of electronic business data such as invoices. This value, which is based on electronic signatures – under certain conditions – providing integrity and authenticity assurances regardless of time and type of electronic (transport or storage) medium, has been recognized within the EU through the e-Signature Directive, as well as more recently through Council Directive 2001/115/EC where they are one of a limited set of compliance options for sending and storage of electronic invoices.

NOTE: compared to the previous version of this document, a few changes have been brought in section 5.7.1 and 5.7.2 and an annex I.7 has been added. This current version overrides the previous one dated of July 2006.

The final review/endorsement round for this CWA was successfully closed on 6th November 2007.

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Introduction

According to the Council Directive 2001/115/EC invoices sent by electronic means shall be accepted by Member States provided that the authenticity of the origin and integrity of the contents are guaranteed. This could be guaranteed by means of an advanced electronic signature within the meaning of Article 2 (2) of Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures; Member States may ask for the advanced electronic signature to be based on a qualified certificate and created by a secure signature-creation device, within the meaning of Article 2(6) and (10) of the aforementioned Directive.

Although many technologies exist that may be called 'advanced electronic signatures'. In practice, the more widely used Advanced Electronic Signatures in an EU context are typically Public Key Infrastructure (PKI)-based digital signatures using the X.509v3 standard, which have been issued by a Certification Authority using a minimum set of rules and agreements to ensure compliance with the four-part EU definition. At least digital signatures based in X.509v3 certificates should be accepted by all Member States. EESSI standards should be adopted as common technical interpretation, instead of creating new standards, to foster interoperability.

Authenticity and integrity are the sole and clear requirements of the Invoicing Directive for electronic invoices. In addition, Directive 2001/115/EC clearly states "*Member States shall not require invoices to be signed*", thus excluding giving signatures, even qualified electronic signatures, the meaning of "content commitment", as per TECHNICAL CORRIGENDUM 3 to ISO 9594-8: 2001. Following this intention it has to be indicated that this requirements can be fulfilled by any electronic invoice, may it be signed by a legal or a physical person. Both scenarios are possible.

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in the present document are to be interpreted as described in RFC 2119 [10].

1 Scope

Electronic signatures play a major role in electronic invoicing – for transmission of invoice data by EDI or non-EDI - to guarantee authenticity of the origin and integrity of the contents of the invoices. Member States may ask for advanced electronic signature to be based on a qualified certificate.

In this document questions regarding the adoption of electronic signatures for electronic invoicing are discussed. It should help the reader to implement and integrate its software or hardware solutions for signing and verifying its e-invoices regarding the legal requirements.

2 Normative References

The following normative documents contain provisions which, through reference in this text, constitute provisions of this CWA. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this CWA are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies."

- [1] Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures
- [2] Council Directive 2001/115/EC of 20 December 2001 amending Directive 77/388/EEC with a view to simplifying, modernising and harmonising the conditions laid down for invoicing in respect of value added tax
- [3] ETSI TS 101 903, XML Advanced Electronic Signatures (XAdES)
- [4] ETSI TS 101 733, Electronic Signatures and Infrastructures (ESI); Electronic Signature Formats
- [5] ITU-T Recommendation X.509 (2005) | ISO/IEC 9594-8: 2001 – Information technology – Open Systems Interconnection — The Directory: Public-key and attribute certificate frameworks
- [6] ITU-T Recommendation X.520 (2005) | ISO/IEC 9594-6:2001 – Information technology – Open Systems Interconnection – The Directory: Selected attribute types
- [7] ITU-T Recommendation X.521 (2005) | ISO/IEC 9594-7:2001 – Information technology – Open Systems Interconnection – The Directory: Selected object classes
- [8] ETSI TS 101 862: Qualified Certificates profile V1.3.2 (2004-06)
- [9] IETF RFC 3280 – Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile
- [10] IETF RFC 2119: "Key words for use in RFCs to Indicate Requirement Levels".
- [11] IETF RFC 2104: "HMAC: Keyed-Hashing for Message Authentication"
- [12] ETSI TS 102 734: Profiles of CMS Advanced Electronic Signatures based on TS 101 733 (CAdES)
- [13] ETSI TS 102 904: Profiles of XML Advanced Electronic Signatures based on TS 101 903 (XAdES)