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Standard Recommendation  
S.R. CWA 16464-1:2012

# Electronic invoicing - Part 1: Addressing and Routing

## S.R. CWA 16464-1:2012

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## Electronic invoicing - Part 1: Addressing and Routing

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN-CENELEC Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

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## Foreword

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties on 2012-02-15, the constitution of which was supported by CEN following the public call for participation made on 2010-02-26. It forms one of a set of CWA's prepared by this Workshop.

A list of the individuals and organizations which supported the technical consensus represented by the CEN Workshop Agreement is available to purchasers from the CEN-CENELEC Management Centre. The following organizations endorsed this document:

- AITI, Italy
- CEGEDIM, France
- Dr. Otto Mueller Consulting, Switzerland
- Hilti Corporation, Liechtenstein
- Hub2Hub, Italy
- ID Cyber-Identity Ltd, Switzerland
- Legal Counsel, Stefan Engel-Flechsigg, Germany
- OFS Portal LLC, USA
- Orange – France Telecom Group, France
- Sage France, France
- SERES, France
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- Trustweaver Sweden, Sweden
- Voxel Group, Spain
- xft GmbH, Germany

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The draft CWA was presented and discussed with industry representatives during two Open meetings, the first on September 22 and the other on December 12, 2011, both held in Brussels. The public comments period run from July 15th 2011 until September 15th 2011.

The final review/endorsement round for this CWA was started on 2012-04-04 and was successfully closed on 2012-04-16. The final text of this CWA was submitted to CEN for publication on 2012-04-18.

This CWA is part of a set of CWAs that has been prepared by Phase II and Phase III of CEN/WS e-Invoicing.

The following persons from the CEN/WS eInvoicing III Working Group 3 participated in the work of this document :

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Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN-CENELEC Management Centre.

## 1 Introduction

The communication from the European Commission Nr. 0712 "Reaping the benefits of electronic invoicing for Europe" [1] from 2 December 2010 states in Action point 3.2:

- *"CEN should analyse by end of 2011 the need and propose actions for the adoption of interoperable Addressing and Routing procedures by the e-invoicing industry participants."*

This demand overlaps to a certain extent with a task in the business plan of the CEN Workshop on e-Invoicing phase 3 [20] from 9 February 2010. This task requires the workshop's task group 3 on Interoperability "to tackle the Addressing and Routing issue". The subject was therefore discussed in more detail and the results issued in a separate (this) CEN Workshop Agreement (CWA). However, it must be stressed that despite the attribution of substantial resources a profound analysis was beyond the possibilities, i.e. further work has to be performed for an in-depth analysis.

The Expert Group report on Electronic Invoicing [2] deals with the topic of Addressing and Routing as well and sets out several requirements for more open Addressing and Routing principles. (Compare section "4.1 Expert group report".)

These principles do not only apply to electronic invoicing but to all other e-business *messages*. As such, interoperability should be achieved by easy and cost-effective integration into the existing supply chain management and not be constrained to individual industrial or trade sector solutions.

Addressing means managing the logical identifiers which refer to (trading) parties and resolve them to the referenced Routing information.

Routing is finding a path to the recipient of a data set and the transmission to the final recipient or an intermediary.

A message is an electronic envelope that contains Addressing and Routing information in its header and which includes one or more E-Invoice, Electronic Business Document or other information as its payload.

The explanations in the previous paragraph show that Addressing and Routing of messages is important in an environment of highly automated e-business exchange. This is not the case in scenarios which rely on manual interaction, e.g. a supplier entering invoice data in a web-interface provided by a large buyer. Therefore, the scenario of automated exchange ("Straight Through Processing") is assumed for all statements within this document.

CWA 16464-2 Model Interoperability Agreement for Transmission and Processing of Electronic Invoices and other Business Documents [4] specifies the requirements set out in chapter 2.4 and Conformance Criterion 3 of CWA 16464-3 on Conformance Criteria and gives an example of how the systems of two Service Providers can regulate how they interoperate in general. This document elaborates on the chapter 2.5 and Conformance Criterion 6 of the CWA 16464-3 Conformance Criteria for Interoperability between Electronic Invoicing Service Providers [3]. It examines the *Addressing* and *Routing* of electronic *messages* in a European and global environment. It analyzes the current situation and gives guidance on further actions to be taken.

## 2 Scope

Within the framework of CWA 16464-3 Conformance criteria for Interoperability between Electronic Invoicing Services, the scope of this deliverable, CWA 16464-1: "Addressing and Routing Status Review", is predominantly to examine the present day selection, differentiation and usage of party *identifiers* in Addressing and Routing of e-Invoices and e-business *messages* in Europe to foster interoperability across Service Providers.

The review's focus is on *Addressing of messages* in an e-business environment. For the discussion of this subject, technical and commercial topics have to be considered. The view on these topics is specified by applying a three-layered model (content, messaging, transport) and sets the focus on the middle layer, which is about e-business messaging.

The document further elaborates on the logical address identifiers in a *message* envelope, i.e. the ones used in messaging, e.g. the EDIFACT and CEFACT header segments, and the use of *meta-identifiers* for the differentiation of *identification schemes*, especially the International Code Designator (ICD) defined within the ISO/IEC 6523 standard.

This document therefore focuses on the main issues related to these two aspects of *Addressing*:

- What are the *identifiers* currently used for *Addressing* and how are the *identification schemes* they use specified?
- How can we reconcile these *identifiers* to the network endpoint *addresses* the messages are routed to?

## 3 Background

Trade has evolved in many years. Where it originally started as barter, it has developed in a number of dimensions. One of the major changes is the fact, that not all of the actions belonging to trade are required to happen at the actual moment and place of the trade itself (e.g. the transfer of money from the bank account of the *buyer* to the *supplier* may be later or sometimes even earlier in time). In modern times the information exchange facilitating these steps has migrated from paper to electronic information transfer. This has emphasized the need to align the information exchanges to the trade flow – ensuring that the relevant parties are identified and informed.

Please note: While this workshop focuses on Invoicing, we realize that other business information exchanges take place and that these should not be regarded as outside the *Addressing and Routing* context described here.

The most common transfer of Invoice information is currently by paper documents being exchanged (routed) from the *supplier* to the *buyer*. These have an *Addressing and Routing* requirement: the paper needs to be delivered to the appropriate party (where the invoice information is processed). The 'delivered to' requires some understood way of Routing the document and the 'relevant party' requires suitable identification of the *buyer* party.

In a computerized or electronic transfer the Invoice exchange is between two business applications over a computer network, i.e. this exchange is highly automated. This concept of no or minimal manual interaction is also referred to as Straight Through Processing (STP). The new challenge is how to identify the correct business party, and then how to identify the application in the network that is used by this party for sending and receiving.

Electronic invoices as well as other electronic documents are exchanged in *messages*. A *message* is an electronic package of information used for transmission, containing one or more document(s) (sometimes known as the payload) and an envelope that contains *Addressing and Routing* information.

So we can say that Party Identification is required to know **who** to deliver the Invoice(s) to (and who they came from), and *Message Addressing* is required to know **where** to deliver the *message* (and the Routing necessary).

*Addressing* information are logical identifiers which refer to the involved parties.



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