CEN

WORKSHOP

AGREEMENT

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Reference Architecture 2.0 for eBusiness harmonisation in Textile/Clothing and Footwear sectors

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Foreword

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties on 2013-06-26, the constitution of which was supported by CEN following the public call for participation made on 2012-01-23.

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. These organizations were drawn from the following economic sectors:

- fashion industry,

- textile, clothing,

- footwear and

- ICT-eBusiness.

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The final review/endorsement round for this CWA was started on 2013-06-14 and was successfully closed on 2013-06-26.The final text of this CWA was submitted to CEN for publication on 2013-06-27.

The following companies/organizations endorsed the CWA:

- Ab. Telematica Italy

- Alugroup, Spain

- AEDT - European Association of Fashion Retailers, EU

- Athens Technology Center SA., Greece

- Aton Spa., Italy

- Bivolino, Belgium

- Canali Spa., Italy

- Cariaggi Lanificio Spa. , Italy

- Ariaggi Lanificio Spa., Italy

- CEC - European Confederation of the Footwear Industry,EU

- CENTROCOT, Italy

- Clave Informática SL., Spain

- CTCP- Centro Tecnológico del calçado de Portugal, Portugal

- Compello GmbH. (former Client Computing Germany GmbH.), Germany

- Domina Srl., Italy

- EDW International Srl., Italy

- ENEA - National Agency for New Technologies, Energy and Sustainable Economic Development, Italy

- Ermenegildo Zegna Group, Italy

- Essecubo Srl., Italy

- EURATEX - European Apparel and Textile Confederation, EU

- Filidea Srl., Italy

- Finnish fashion trade magazine MODIN, Finland

- Fratelli Piacenza Spa., Italy

- Gruppo Colle Srl., Italy

- GS1 Germany, Germany

- GCS, Germany

- TMTE - Hungarian Society of Textile Technology and Science, Hungary

- i.level software Ltd., United kingdom

- INESC Porto - Institute for Systems and Computer Engineering of Porto, Portugal

- INESCOP - Instituto Tecnológico del Calzado y Conexas, Spain

- INTEA di Vareschi Roberto & c. Snc., Italy

- INTEROP/VLab, France

- Lab#ID (LIUC- Università Cattaneo), Italy

- LogisLab c/o PIN Scrl - Polo Universitario "Città di Prato, Italy

- Loro Piana Spa., Italy

- Marchi & Fildi Spa., Italy

- Multidata Srl., Italy

- INCDTP - National Research & Development Institute for Textiles and Leather, Romania

- Next Tecnology Tecnotessile - Società Nazionale di Ricerca R.l., Italy

- Porini Srl., Italy

- Robinson Srl., Italy

- Schaeffer Productique, France

- Siges Srl., Italy

- Smarten Srl., Italy

- SMI – Sistema Moda Italia, Italy

- Sophia Analytica Ltd., Bulgaria

- Softwork Srl., Italy

- Sonnenglanz Consulting BV, Netherlands

- Tessitura Monti Spa., Italy

- Tor Information Systems Ltd., United kingdom

- Trend Technology Srl., Italy

- TREVISO TECNOLOGIA – Azienda Speciale per l'innovazione della Camera di Commercio di Treviso, Italy

- TXT e-solutions Spa., Italy

- UIT - Union des Industries Textiles, France

- University of Modena & Reggio Emilia, Italy

- UTOK - Association for Textil, Leader and Shoes of Bosnia and Herzegovina, Bosnia and Herzegovina

- WebScience Srl, Italy

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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.

Executive summary

1. The aim of this document is to offer a Guideline of the **updated Reference Architecture** (RA) for the eBusiness harmonisation in the Textile Clothing and Footwear sectors as it results from the activities of the **CEN Workshop "eBusiness in the textile, clothing and footwear sectors (WS eBIZ)"**.

The eBIZ architecture aims to enable interoperability between existing systems and organisations. Achieving it, would lower the threshold for starting eBusiness both for large enterprises and for medium and small actors in the supply chain and would also encourage technology suppliers to provide better support and services for eBusiness.

It can be used as reference both for new eBusiness implementations and by existing users needing to modify their systems or to achieve interoperability with others.

The **first version** of the Reference Architecture was developed in 2009 in the framework of the eBIZ-TCF project (*www.eBIZ-TCF.eu*), a DG Enterprise and Industry initiative that was an European large scale initiative to foster the adoption of eBusiness and related technologies and standards in sectors characterised by a large presence of SMEs and by a low level of adoption of eBusiness and interoperability standards.

This document is the final version of the Reference Architecture of eBIZ, released in 2013.

The CEN Workshop on eBusiness in the textile, clothing and footwear sectors (WS/eBIZ) has performed an activity to review and update the RA in order to satisfy new requirements and progress in the real textile, clothing and footwear (TCF) industry.

2. As main **initial requisite**, wherever possible, the architecture's specifications are based on existing public standards and already running experiences.

In general terms, the RA does not aim to develop or validate a new technology or a new software but aims to setup an approach to foster eBusiness adoption (eAdoption) in two sectors dominated by SMEs through a work of harmonisation that is strongly aware of the standardisation achievements.

The key features of the architecture:

- **Based on past experiences** of existing communities of users and European and International public standards.
- **Inclusive approach**: open, designed to support many models and many solutions (ASP, P2P, Hub…).
- **Public and usable**: public and usable specifications to reduce the gap between standard experts and company managers and technicians.
- **Scalable**: of value to small and medium enterprises as well as large organisations.
- **Targeted to real needs**: the different requirements of manufacturing networks and of production to retail relationships.

In short the architecture aims to create a favourable environment to establish a collaboration between producers and between producers and retail organisations.

3. For the producer-retail supply chains (*downstream* part of the supply chain) and for the producer-supplier networks (*upstream* part) different requirements were outlined in **the past analysis reports** (produced by the eBIZ-TCF project and by CEN WS eBIZ [1]) and the architecture started from them in order to propose appropriate technological and methodological specifications to cover topics such as data models, communication protocols and product classification.

4. The document offers a guideline for a possible and coherent reference framework of existing specifications and initiatives that enable the design of eBusiness experiences; a strong focus is on the reference scenarios and on some general requirements; when developed and maintained by third parties, the technical specifications are referenced from their sources so that it is easy to design harmonised eBusiness solutions.

5. This document is the FINAL CEN Workshop Agreement (CWA) delivered by the CEN Workshop on eBusiness in the textile, clothing and footwear sectors (WS/eBIZ) in the framework of the activities of Reference Architecture Updating (Task 2 of WS/eBIZ workplan).

This document should be assumed as the technical reference in order to tackle the objectives of eBusiness harmonisation in Textile Clothing and Footwear initiatives aiming to join eBIZ.

Topics that are object of **new chapters** or relevant improvements in respect of the RA released in 2009 are:

- Business model classification,
- Customised and health-oriented footwear manufacturing scenarios,
- RFID usage in the supply chain,
- eInvoicing,
- Testing and validation,
- Yarn production technical data and quality check,
- Communications protocols,
- A new approach to the process description based on the concept of 'Function'.

6. The report is structured on three main parts:

- The initial chapters 1, 2 and 3 offer a general methodological overview.
- The remaining chapters detail the architecture in its main areas and allow to choose the right scenarios of interest (business models, upstream manufacturing networks for Textile-Clothing and for Footwear, downstream relationships between retailers and producers, Communication, RFID devices, product numbering and identification)
- The appendices offer the details about the technical implementation and the references about on-line resources available to implementers.

7. This document is available from the eBIZ web site (www.ebiz-tcf.eu) together with other resources that should help the designers and implementers in their work.