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Supply chain interoperability and integration —

Part 100: Verification of supply chain data

Interopérabilité et intégration dans la chaîne d'approvisionnement —

Partie 100: Vérification des données de la chaîne d'approvisionnement

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Introduction

The supply chain needs standard solutions to increase the effectiveness, efficiency, and security of business through greater interoperability and integration across applications, facilities, companies, and borders. Supply chain data is understood through identifiers; identifiers (for parts, products, services, materials, certifications, legal entities, etc.) are found in every process of the supply chain from procurement to warehousing, making, order processing, and logistics. Identifier resolution is essential to meeting know your customer (KYC), know your supplier (KYS), and know your item (KYI) requirements. For interoperable, integrated, sustainable, and efficient supply chains, identifiers and the datasets they represent need to be verified through automated processing.

ISO 8000-115 describes a quality identifier as definitive, resolvable, and consisting of a prefix element to represent the legal entity that issued the identifier and the identifier element assigned by the owner to represent the object and the data describing it, along with any use restrictions. A part number in ISO 8000-115 format, called an international part number (IPN), can be resolved through looking up the prefix owner in a prefix record in an ISO 8000-115 prefix name server (PNS) and the addresses in that prefix record can be used to request resolution of the part number.

The ability to verify the validity of and data represented by an identifier to support business processes in a timely and cost-effective manner is dependent on the ability of the identifier issuing party to reply to a request for identifier verification by providing sufficient data to perform validation. Manual verification of an identifier can be achieved through using and verifying an identifier formatted in accordance with ISO 8000-115; to support efficiency, interoperability and integration in the supply chain, an internationally agreed standard is needed to automate this verification.

This document supports the use of an industrial internet (see ISO 25500-1; the industrial internet is an efficient and trusted environment for data sharing to occur that uses callback security where the legal identity of the party requesting data verification and the legal identity of the party replying to the request are verified. This is achieved by using registered ISO 8000-115 compliant prefixes for both parties and routing the requests and the replies through a PNS. The prefix records in the PNS make publicly visible only the verified international business identifier (IBID) of the prefix owner; this enables both parties to know the sending or responding entity's verified legal identity at the same time as it protects their privacy by keeping confidential their electronic address information used for the exchange of verified data.

To support secure, standardized, automated verification of supply chain data, this document provides the fundamental tools of the industrial internet.

Annex A contains an identifier that conforms to ISO/IEC 8824-1. The identifier unambiguously identifies this document in an open information system.

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