GS1 Application Standard for usage of ISO/IEC 6523 International Code Designator (ICD) 0209

ISO/IEC 6523 is a standard whose aim is to define a structure for uniquely identifying organisations and parts thereof.

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Contributors

Name	Organisation
Henri Barthel	GS1 Global Office
David Buckley	GS1 Global Office
Dan Clark	GS1 Global Office
Sean Dennison	GS1 Ireland
Piergiorgio Licciardello	GS1 Global Office
Tom Eric Schmidt	August Storck KG
Jan Westerkamp	GS1 Nederland
Dirk Willekens	GS1 Belgium*Luxembourg
Stephan Wijnker	GS1 Australia

Log of Changes

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1.0	Feb 2021	D.Clark & D.Buckley	Initial publication based on WR 20-382

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1 Introduction

ISO/IEC 6523 is a standard whose aim is to define a structure for uniquely identifying organisations and parts thereof in computer data interchange and specify the registration procedure to obtain an International Code Designator (ICD) value for an identification scheme. Some organisations including PEPPOL (Pan-European Public Procurement On-Line) and the European Commission have adopted this standard to discriminate identifiers issued by different organisations. More than 200 ICDs have been allocated so far. These include ICD 0088 for the GS1 Location Number (GLN) and 0160 for the GS1 Global Trade Identification Number (0160). GS1 requested and obtained ICD 0209 to generically refer to other GS1 identification keys.

Previously, only GS1 identifiers GLN (088) and GTIN (0160) could be used in transactional data exchanges based on ISO 6523 (European Norm on eInvoicing EN 16931, Peppol standards, European eProcurement workgroup TC440, …). To be able to use all GS1 identifiers, a new code (0209) has been introduced to provide possibility on using all (and even combined) GS1 identifiers.

2 Purpose

The purpose of this document is to specify the data structure to be used in conjunction with ICD 0209.

2.1 Principles

The following shall be respected:

1. The GS1 Global Location Number (GLN) shall be used with ICD 0088 if not used in combination with extension
2. The GS1 Global Trade Item Number (GTIN) shall be used with ICD 0160 if not combined with any other Application Identifier
3. GS1 ID keys other than GLN and GTIN can be represented using ICD 0209 followed by the appropriate Application Identifier
4. The ICD 0209 shall not be used as an alternative to the normal use of data in a standard EDI message. It shall be restricted to GS1 identification keys

Standard representation of GS1 identification keys with International Code Designators

ICD	AI	GS1 identification key	Used to identify
0088	N/A	Global Location Number (GLN)	Parties and locations
0160	N/A	Global Trade Item Number (GTIN)	Products and services
0209	414 + 254	GLN (Physical) + Extension	Parties and locations
0209	01 + 21	GTIN + Serialization	Products and services
0209	00	Serial Shipping Container Code (SSCC)	Logistics units
0209	8003	Global Returnable Asset Identifier (GRAI)	Returnable assets
0209	8004	Global Individual Asset Identifier (GIAI)	Assets
0209	8017	Global Service Relation Number (GSRN)	Service provider
0209	8018	Global Service Relation Number (GSRN)	Service recipient
0209	253	Global Document Type Identifier (GDTI)	Documents

ICD	AI	GS1 identification key	Used to identify
0209	401	Global Identification Number for Consignment (GINC)	Consignments
0209	402	Global Shipment Identification Number (GSIN)	Shipments
0209	255	Global Coupon Number (GCN)	Coupons
0209	8010	Component/Part Identifier (CPID)	Components and parts
0209	8013	Global Model Number (GMN)	Product models

3   Implementation

The syntax to be used with ICD 0209 is based on:

- **GS1 General Specifications**
  https://www.gs1.org/standards/barcodes-epcrfid-id-keys/gs1-general-specifications

Implementation based on element strings is possible in two environments:

1. **Addressing registry:**

   Rules for 0209 identifiers:

   - MUST be at least 1 character long
   - MUST only contain letters and numeric digits from the invariant character set of ISO-8859-1
   - MUST NOT be more than 50 characters long
   - Values MUST be treated case insensitive
   - Only 1 primary (party) identifier allowed (see chapter 5.2 & 5.4 in GS1 Digital Link Standard)

   Examples:

   - Currently used GLN:
     `<cbc:EndpointID schemeID="0088">5410000999993</cbc:EndpointID>`
   - When using GLN with extension:
     `<cbc:EndpointID schemeID="0209">414`5410000999993`254`12345678901234567890`</cbc:EndpointID>`
   - Same principle can be used with e.g. GSRN:
     `<cbc:EndpointID schemeID="0209">8018`541448820046951753`</cbc:EndpointID>`

2. **Data exchange:**

   Rules for 0209 identifiers:

   - UTF-8

   Examples:

   - Currently used GTIN:
     ```
     <cac:StandardItemIdentification>
         <cbc:ID schemeID="0160">7733018600000</cbc:ID>
     </cac:StandardItemIdentification>
     ```
   - Serialised GTIN using code 0209:
     `<cac:StandardItemIdentification>`

```
        <cbc:ID schemeID="0209">0107733018600000211WUXWGWDX5</cbc:ID>
    </cac:StandardItemIdentification>
```

3.1   Information Sequencing

When encoded, the string must:

- Start with the "0209"

- Followed by the GS1 Key AI

- Followed by the key value

- If applicable, followed by the next GS1 Key AI

- Followed by the key value (according to rules defined in GS1 General Specifications)

A   Extract of ICD registry

International Code Designator: 0209

ICD :	0209
Name of Coding System :	GS1 identification keys
Intended Purpose/App. Area :	GS1 identification keys and key qualifiers may be used by an information system to refer unambiguously to an entity such as a trade item, logistics unit, physical location, document, or service relationship.
Issuing Organization :	GS1 Avenue Louise 326 1050 Brussels BELGIUM Tel: +32 495 52 9444 Fax: +32 2 788 78 99 Contact: Henri Barthel Email: henri.barthel@gs1.org
Structure of Code : number of characters and their significance, if any: 1) identification of the check digit characters, if any: 2)	The code will include an application identifier indicating the type of GS1 identification key used for an object, followed by the value of the key. Variable length, depending on the type of GS1 ID key
Display Requirements :	None
Character Repertoire :	The character set is a subset of ISO/IEC 646, specified in the GS1 General Specifications, available at https://www.gs1.org/standards.
Language(s) Used :	English
Supports Org. Parts? :	GS1 Identification keys include a prefix assigned by a GS1 organisation to a licensee.
Org. Identifier Reuse :	The re-use of identifiers depends on the nature of the GS1 identification key. The key management and re-use rules are specified in the general GS1 specifications.
Orgs Covered By System :	Any organization that needs to identify uniquely trade items, logistics units, physical locations, documents, or service relationships.
Notes on Use of Code :	GS1 identification keys are used by millions of organizations in the world. They are widely adopted by the consumer goods, health care and other industries.
Alt. Names of Scheme :	GS1 ID keys
Sponsoring Authority :	GS1 AISBL avenue Louise 326 B-1050 Brussels BELGIUM Contact: Henri Barthel, henri.barthel@gs1.org, +32 495 52 9444
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