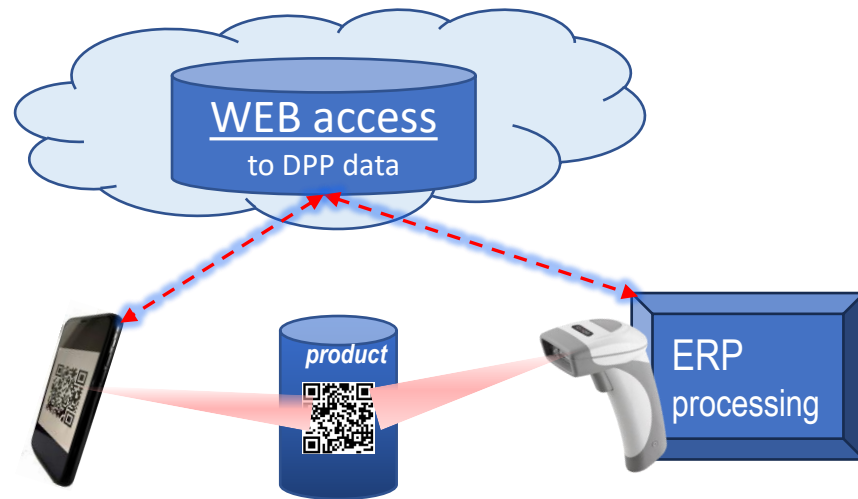


Unique Identification & WEB-Link



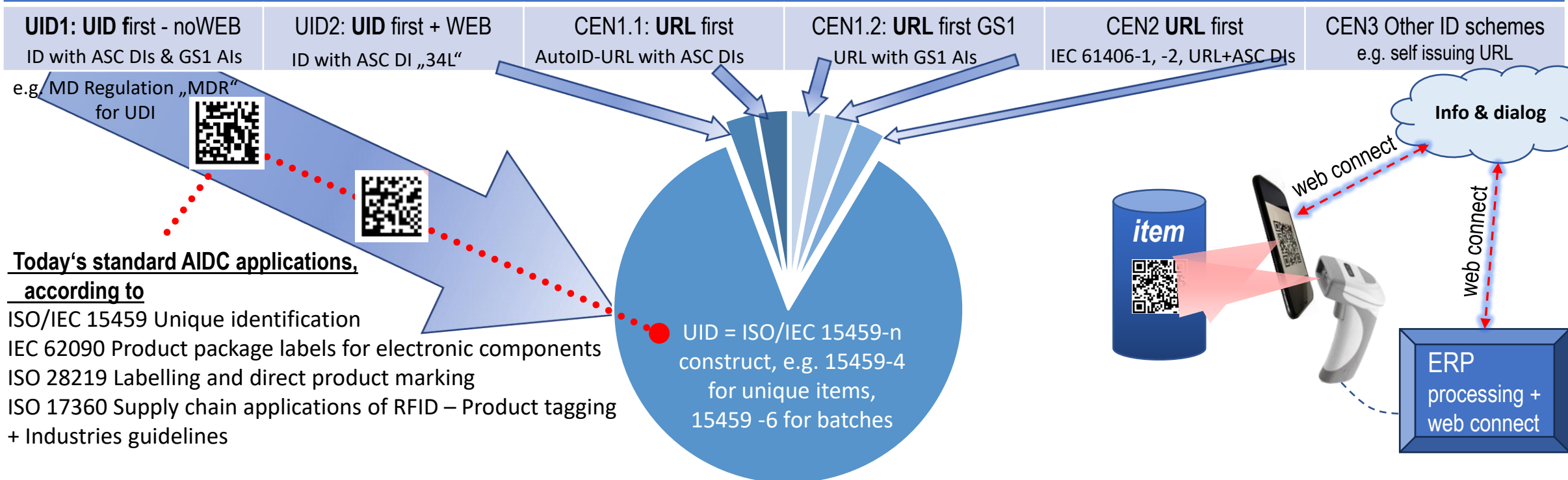
Examples of Identifiers with and without WEB-Link and suitability for DPP



® EDCi - r250213oeh

“UID first” and/or “URL first” methods

Unique identification methods for AIDC media



For finding the most suitable/convenient DPP constructs code for the individual “Scan Spot” don’t hesitate to scan code examples at the appropriate “Scan Spot” of your application:

UID1 UID first	UID2 UID first + WEB	CEN1.1 URL first AutoID URL	CEN1.2 URL first GS1 Dig. Link	CEN2 URL first IEC ID link-1, -2	CEN3,4 Others



Terms: UID first = Codes in AIDC syntax for GS1 Application Identifiers, ASC Data Identifiers (GS1 syntax, DIN 16598 syntax, ISO/IEC 15434 syntax)
 URL first = Codes in RFC syntax for WEB access

METHOD UID1: “UID first”, no link, option WEB access via APP support


Unique identification method

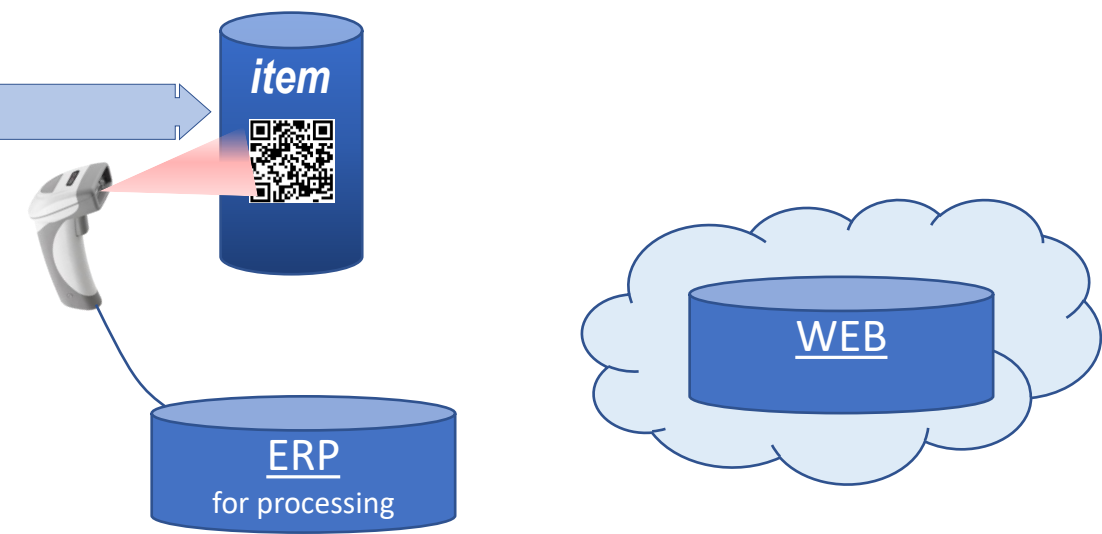
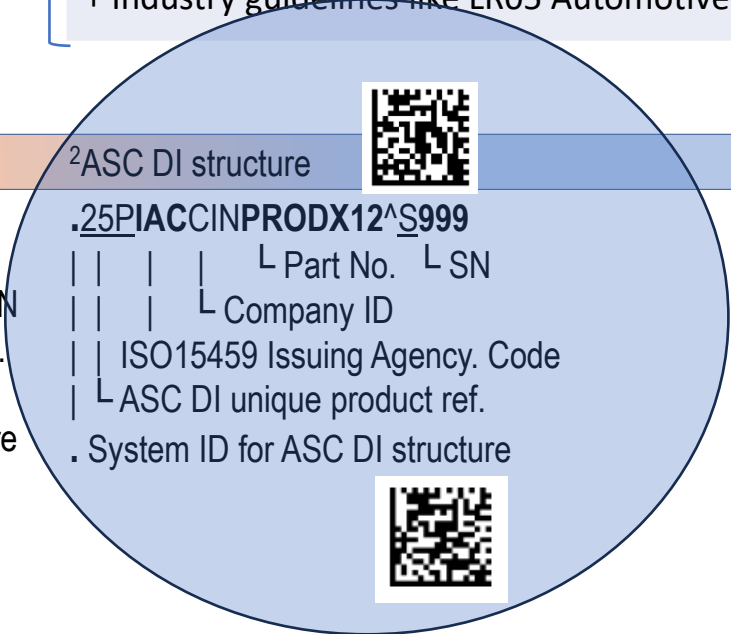
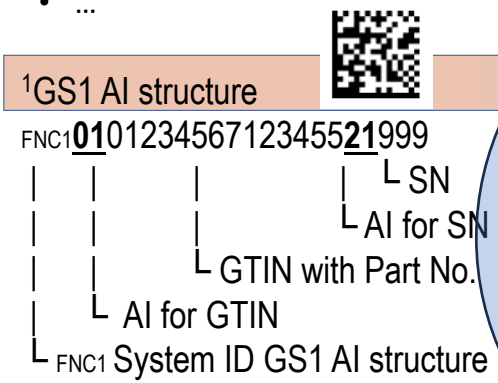
UID1 UID first	UID applied with	GS1 “AIs” or ASC “DIs”		
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Application VERY HIGH since the 90th:

All industries, e.g

- Air & space.
- Automotive and suppliers
- Chemical
- Consumables
- Electro, electronic
- Engineering
- Healthcare (UDI, PPN, ...)
- ...


Standard „UID first“ based on ISO/IEC 15418 and ISO/IEC 15459	Example with
ISO/IEC 15459-4 Unique identification: Individual products (support by ~40 ISO/IEC 15459-2 Issuing Agencies and its registered CIN holders world wide)	¹ GS1 AIs: (01) GTIN + (21) SN ² ASC DIs: (25P) IAC.CIN, PN + (S) SN
ISO 28219 Labelling and direct product marking linear bar code and 2D	
ISO 17367 (17360)-Supply chain applications of RFID — Product tagging 	
+ Industry guidelines like LR05 Automotive for Barcode and RFID on item level	ASC DI: (37S) IAC CIN PN + SN






METHOD UID1: "UID first" with GS1 "AIs", no WEB link


item

Scan DEMO



	jd2	GS1DataMatrix	Symbology type GS1DataMatrix passed by reader
Raw data:	0101234567123455 21999		
Structure type:	GS1	Application Identifier (AI) following ISO/IEC15418	
Packing index:	01	0	
Article:	123456712345		GTIN-14 product code Labeller ID Issuing Agency: GS1
Check character:	5	Modulo 10 check character correct	
Serial number:	21	999	
			▼ Result of last scan
Resume:			GS1 structure OK

	ID	Data	Comment
▼ Scan no. 1			
Symbology:	jd1	Datamatrix	Symbology type Datamatrix passed by reader
Raw data:	.25PIACCINPRODX12 ^S999		
Structure type:	.	ASC	Data Identifier (DI) following ISO/IEC15418 (with CSID '.')
Labeler:	25P	IACCIN	Labeller ID Issuing Agency: ISO/IEC 15459
Article:	PRODX12		
Serial number:	S	999	
			▼ Result of last scan
Resume:			ASC structure OK

METHOD UID2: "UID first" applied with ASC DIs - ERP and WEB compatible with APP support

Unique identification method A2 ISO/IEC 15459-6 conforming + URL

A2 UID first + WEB

Standard since 2016
ISO/IEC 15418 ASC DI "34L"

Application areas:

- All industries and healthcare using ASC DI structure and ISO/IEC 15459 properties

ASC DI Standard „UID first“ with WEB option

Example with ASC DIs

ISO/IEC 15418, part ANS MH10 Data Identifiers, ASC DI „34L“ P2P

(25P) IAC.CIN PN + (S) SN + (34L) WEB addr.

ISO 28219 Labelling and direct product marking linear bar code and 2D

||

ISO 17367 (17360) - Supply chain applications of RFID-Product tagging



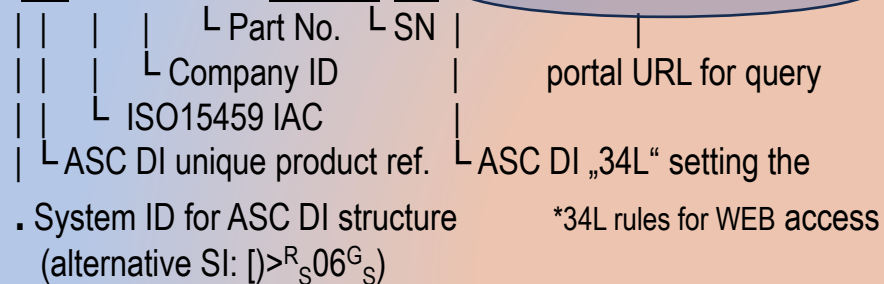
||

IEC 62090 Ed.2.0 - Product package labels for electronic components using bar code and two-dimensional symbologies

with explicit P2P "34L" WEB support.

ASC DI structure with WEB access

.25PQCELMIAQ7B4^S400D02^34LHTTP://ELMICRON.DE/P2P/?S=



Off WEB



App support for „34L“ rules



ON WEB



*34L rules for WEB access: Turn the string for WEB access → [HTTP://ELMICRON.DE/P2P/?S=25PQCELMIAQ7B4%1DS400D02](http://ELMICRON.DE/P2P/?S=25PQCELMIAQ7B4%1DS400D02) To the WEB
(for WEB transfer omit Data Identifier „34L“)

METHOD UID2: "ISO/IEC 15459 UID first" - ERP and WEB compatible with APP support

DEMO with APP SCANLINK



Elmi-ScanLink Verify

File View Device Parse Config Help

.25PQCELMIAQ7B4^S400D02^34LHTTP://ELMICRON.DE/P2P/?S=

	ID	Data	Comment
▼ Scan no. 1			
Raw data:		.25PQCELMIAQ7B4^S400D02^34LHTTP://ELMICRON.DE/P2P/?S=	
Structure type:	.	ASC	Data Identifier (DI) following ISO/IEC15418 (with CSID '.')
Labeler:	25P	QCELMI	ELMICRON Issuing Agency: Eurodata Council
Article:		AQ7B4	
Serial number:	S	400D02	
URL:	34L	HTTP://ELMICRON.DE/P2P/?S=	URL HTTP://ELMICRON.DE/P2P/?S=25PQCELMIAQ7B4%1DS400D02
▼ Result of last scan			
Resume:			ASC structure OK

elmicron

34L rules for WEB access:
Turn the string for WEB access
(omit 34L and AIDC-Syntax)

← . CONVERT

← . TRANSMIT

METHOD CEN1.1: "URL first" - WEB compatible, ERP compatible parsing

AutoID URL 1.3 → → → → ObjectID URL

Unique identification method URL first, data elements applied with ASC DIs

B1 URL first AutoID URL

„URL first“ WEB compatible + ERP parsing

Example with ASC DIs

AutoID URL 1.3: 2022 (biuniqueness by ISO/IEC 15459)

WEB addr. + (25P) IAC.CIN PN + (S) SN

IEC 61406-2 Identification Link (uniqueness by WEB Domain)

WEB addr. + (1P) PN + (S) SN

Specifications based on data standards:

RFC syntax + ISO/IEC 15418, part ASC Data Identifiers, ISO/IEC 15459 properties (option for IEC 61406-2)

New potential application areas:

- All industries and healthcare using ASC DI structure and ISO/IEC 15459 properties

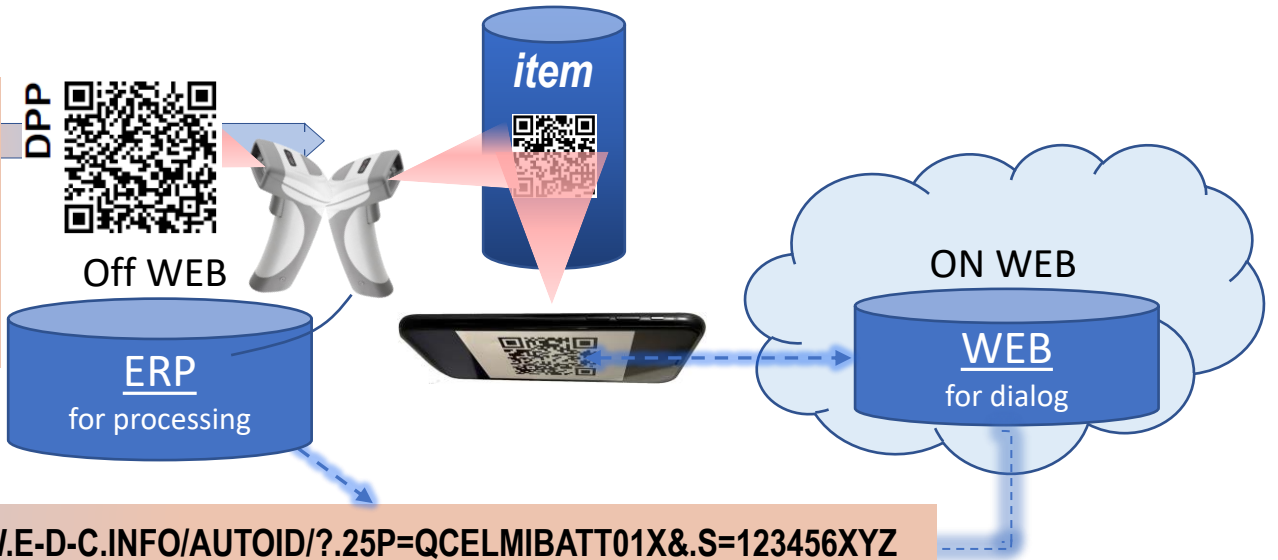
Example codes AutoID URL for WEB access & ERP parsing:

[HTTPS://WWW.E-D-C.INFO/AUTOID/?25P=QCELMIBATT01X&.S=123456XYZ](https://www.e-d-c.info/autoid/?25P=QCELMIBATT01X&.S=123456XYZ)

URL root with „?“ for query				

L Part No. L SN
 IAC+CIN (ISO/IEC15459)
 L ASC DI 25P for unique product ref.
 L . System ID for ASC DIs

Code ready for parsing data elements for ERP fields →



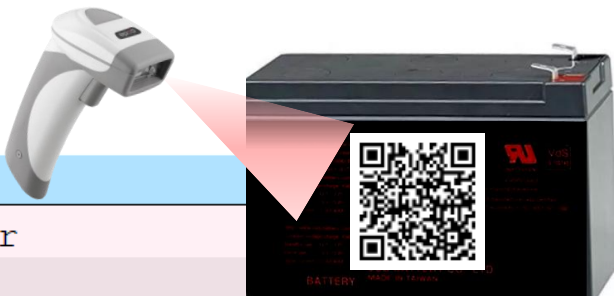
Code ready for direct WEB access → [HTTPS://WWW.E-D-C.INFO/AUTOID/?25P=QCELMIBATT01X&.S=123456XYZ](https://www.e-d-c.info/autoid/?25P=QCELMIBATT01X&.S=123456XYZ)


To the WEB

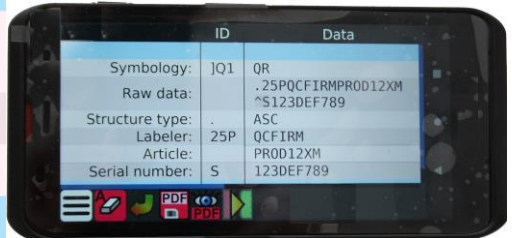
METHOD CEN1.1: “URL first” - WEB compatible + ERP parsing

AutoID URL 1.3, ISO/IEC 15459 conforming

Scan DEMO:



	ID	Data	Comment
			✓ Scan no. 1
Symbology:	JQ1	QR	Symbology type QR passed by reader
Raw data:		HTTPS://WWW.E-D-C.INFO/AUTOID?.25P=QCELMIBATT01X&.S=4221117	
Structure type:		MobileTagging	Mobile Tagging
URL:		HTTPS://WWW.E-D-C.INFO/AUTOID?.25P=QCELMIBATT01X&.S=4221117	 HTTPS://WWW.E-D-C.INFO/AUTOID?.25P=QCELMIBATT01X&.S=4221117
			✓ Contained AutoID URL fields
Labeler:	25P	QCELMI	ELMICRON Issuing Agency: Eurodata Council
Article:		BATT01X	
Serial number:	S	4221117	
			✓ Result of last scan
Resume:			AutoID URL Ok



Unique identification and WEB link

METHOD CEN1.1: AutoID URL 1.3 “URL first” - WEB access + ERP parsing
Scan DEMO WEB response:

AutoID URL Demo

Item information

Product Code	QCELMIBATT01X
Description	6V Power Battery
Image	
Serial number	4221117
Status	Charged
Location	On stock 4



Unique identification and WEB link

METHOD CEN1.2: "URL first" GS1 Digital Link

Unique identification method

CEN1.2 URL first GS1 Dig. link

„URL first“ WEB compatible

Example with GS1 AIs

GS1 Digital Link Standard - URI Syntax: 2022

WEB addr. + AI/GTIN/AI/Attribute/...

||

GS1 Digital Link Standard based on data standards:

RFC syntax + ISO/IEC 15418, part GS1 Application Identifiers, ISO/IEC 15459 properties for company Ids.

New potential application areas:

- All industries and healthcare using GS1 structure

Example GS1 Digital Link :

*<https://id.gs1.org/01/09520123456788/10/ABC123>

| | | |
URL root AI GTIN AI Batch no.



Code ready for direct WEB access → <https://id.gs1.org/01/09520123456788/10/ABC123>

*Source example: GS1 Digital Link Standard: URI Syntax, chapter 5.3: GTIN+Batch → <https://ref.gs1.org/standards/digital-link/uri-syntax/>

Unique identification and WEB link

METHOD CEN2: "URL first" IEC 61406-1/-2

Unique identification method

CEN2 URL first IEC ID link					
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New potential application areas:

- Electronic and related industries

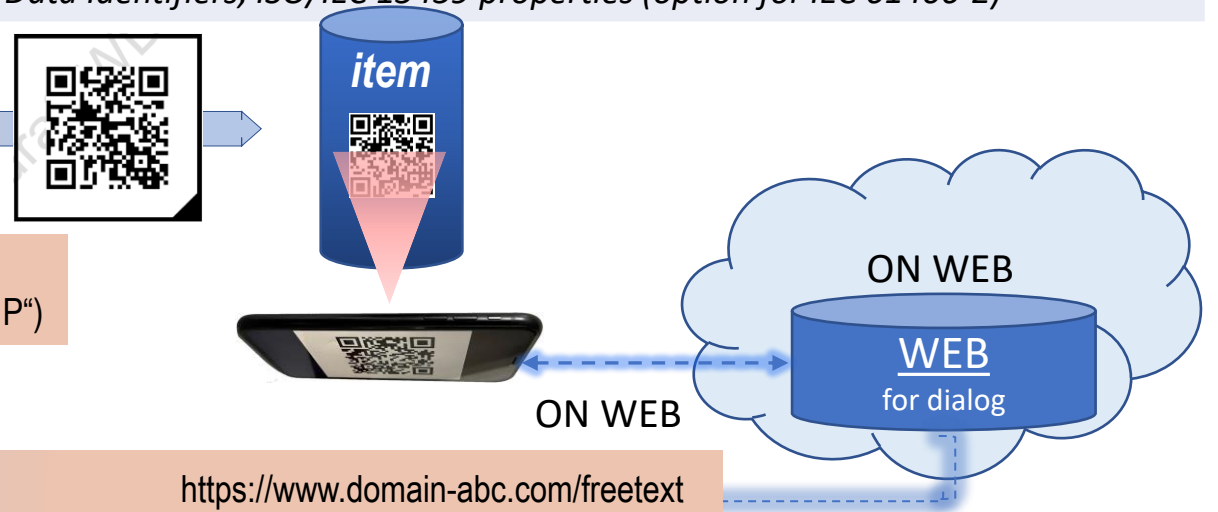
„URL first“ WEB compatible	Example with ASC DIs
IEC 61406-1 Identification Link : 2022, WEB domain as ID, no data parsing <i>Specifications based on data standards: RFC syntax</i>	WEB address, see method 6
IEC draft 61406-2 – Domain ID + ASC DIs for parsing <i>IEC draft 61406-2 based on data standards: RFC syntax + ISO/IEC 15418, part ASC Data Identifiers, ISO/IEC 15459 properties (option for IEC 61406-2)</i>	WEB addr. + (1P)PN + (1T) Batch no.

*Example IEC 61406-1: WEB domain as company ID and labellers construct
<https://www.domain-abc.com/freetext>
*Source: IEC 61406-1, figure 6)

Example IEC 61406-2: WEB domain as company ID and ASC DI attributes,
example see method 3 (but PN to be applied with ASC DI „1P“)

See method 3

IEC 61406-1 Code ready for direct WEB access → <https://www.domain-abc.com/freetext>



Unique identification and WEB link

METHOD CEN2: "URL first" IEC 61406-1

Scan
DEMO



QR source:
IEC 61406-1, fig. 6



Example IEC 61406-1: URL as company ID and labellers construct
<https://www.domain-abc.com/freetext>

Elmi-ScanLink Verify

View Device Parse Config Help

<https://www.domain-abc.com/freetext>

	ID	Data	Comment
			▼ Scan no. 1
Symbology:]Q1	QR	Symbology type QR passed by reader
Raw data:		https://www.domain-abc.com/freetext	
Structure type:		MobileTagging	Mobile Tagging
URL:		https://www.domain-abc.com/freetext	URL https://www.domain-abc.com/freetext
			▼ Result of last scan
Resume:			MobileTagging structure OK

Analysis Tree Process editor elmicron



Example IEC 61406-2: WEB domain as company ID and ASC DI for attributes,
example see method CEN1.1 (but PN to be applied with ASC DI „1P“)



Example see method CEN1.1

METHOD CEN3: “Other identification schemes”



<https://api.godiddy.com/0.1.0/universal-resolver/identifiers/did:web:acme.dpp.spherity.com:battery:7be3b99c-33a3-4d72-a747-feeb2c2ed263?service=product>

Source of example: Presentation Dr. Susanne Guth-Orlowsky, doc. DIN NA 043-04-31 AA N 9147

METHOD CEN4: Not illustrated (under work with CEN JTC24, WG2)

Methods for generating DPP Identifiers considered by *CEN-CLC-JTC 24 Draft JT024001 Digital product passport*

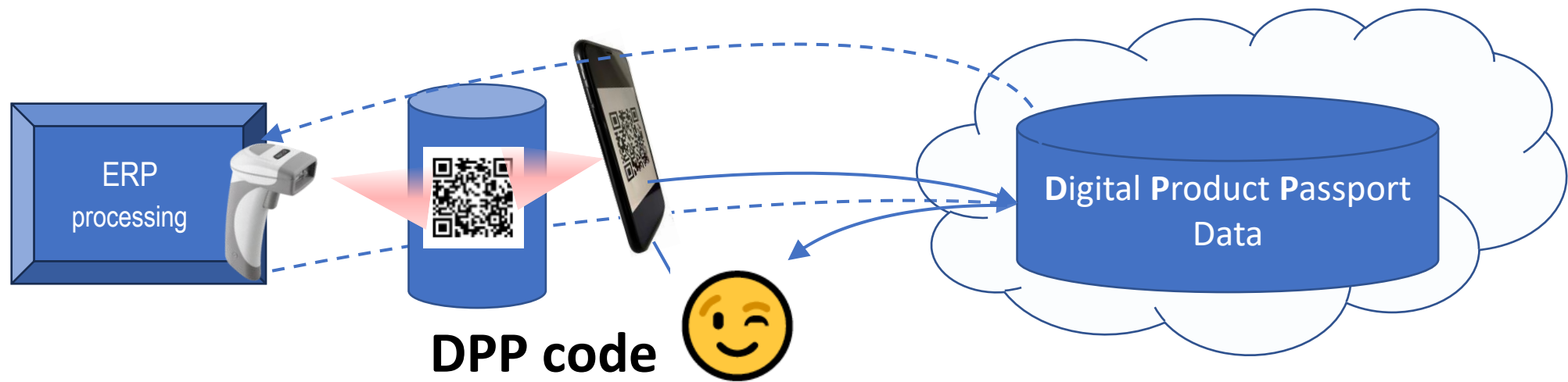
The draft standard of Oct. 2024 includes the methods:



- Method CEN1: Web enabled, structured path identification for products (URL first)
 - GS1 Digital Link, AutoID-URL/ObjectID-URL (URL first)
- Method CEN2: Identification link (URL first)
 - IEC 61406-1, IEC 61406-2
- Method CEN3: Decentralized identifiers, DIDs (URL first)
 - Other methods, e.g. “Self issuing URLs”
- Method CEN4: Structured path identification for RAIN RFID

Further developments or the inclusion of additional methods depend on the contributions of the cooperating parties and liaison bodies.

*Note: “UID first” syntax are not considered yet due to the requirements within the Standardisation Request (SREQ), 31.7.2024
Article (9): The product passport system is to allow a suitable assignment of data carriers to the product which should be accessible without the need for the download of additional software.
This is interpreted by CEN JTC24 DPP that a DPP code shall be smartphone compatible for scanning and WEB access without download of additional software,*



See also Digital-Passport-ID-methods_part-II_.230328 and AutoID URL demonstrator
<https://www.e-d-c.info/en/projects/dpp-passport-en.html>

Questions, contributions, suggestions are appreciated



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