



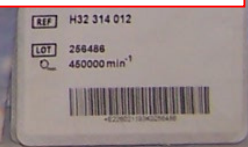
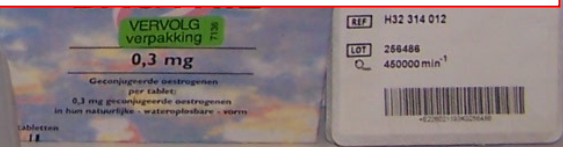
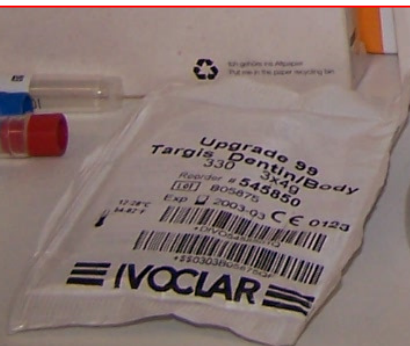
***Uniqueness & Interoperability
for Auto ID supported systems***

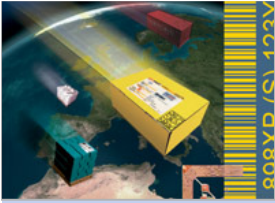
Heinrich Oehlmann
EDC

„AutoID“ for Tracing Products



...today with **BARCODE**





Tracing global Transport

info@ELMICRON.de
www.ELMICRON.de
Tel: 03445 78112 0

 **ELMICRON**
The System House
for Automatic Data
Communication

... today with **BARCODE**



Exceptions accepted

<>Transport ISO 15394 Global Label
<>Qualität UIM Unverwechselbarkeit

Art.-Nr.
E604371

Bezeichnung

X9-20

Auftragsnr.:

47102P

Chargen Nr.:

L35040220

Stück

181

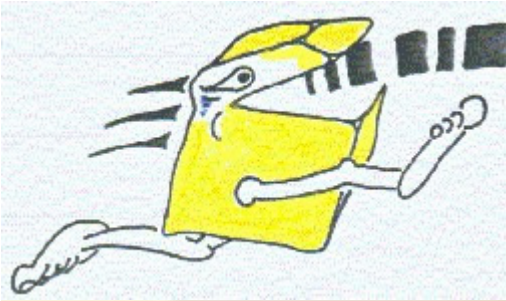


ISO/IEC 15459 Unique Transport Unit ID

License Plate (J) QCBELLF103050709



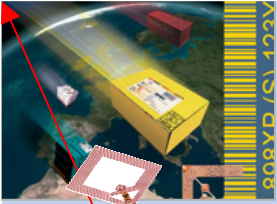
040220



RFID

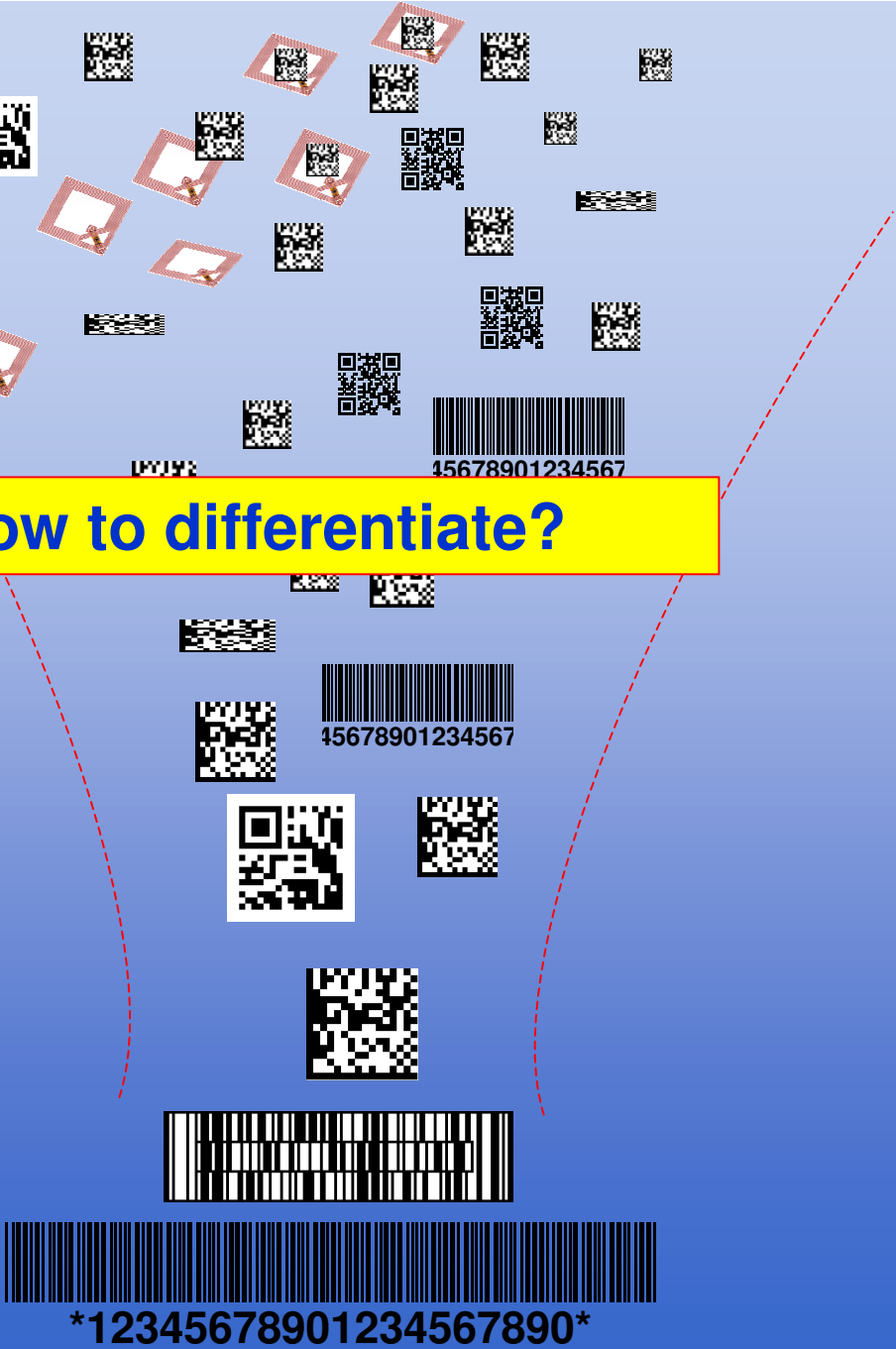
**+RFID can do more,
so what ...**





... how to differentiate?

... what about Uniqueness?



...everyone can issue a number,

0123456789012

0123456789012

01234567890



Who can make sure that no overlapping occurs?



0123456789012



0123456789012

01234567890

01234567890

ANSI, AFNOR, BSI, DIN, DS, IBN, JISC, KATS, NEN, ON, SAC, SAI, SIS, SCC, UNI,..



ISO

ISO/IEC JTC 1 can!

Automotive, Chemical, Electronic industries, Health Care, Consumers, Transport...

The simple rule is: Add your Company ID

+ Company ID 0123456789012

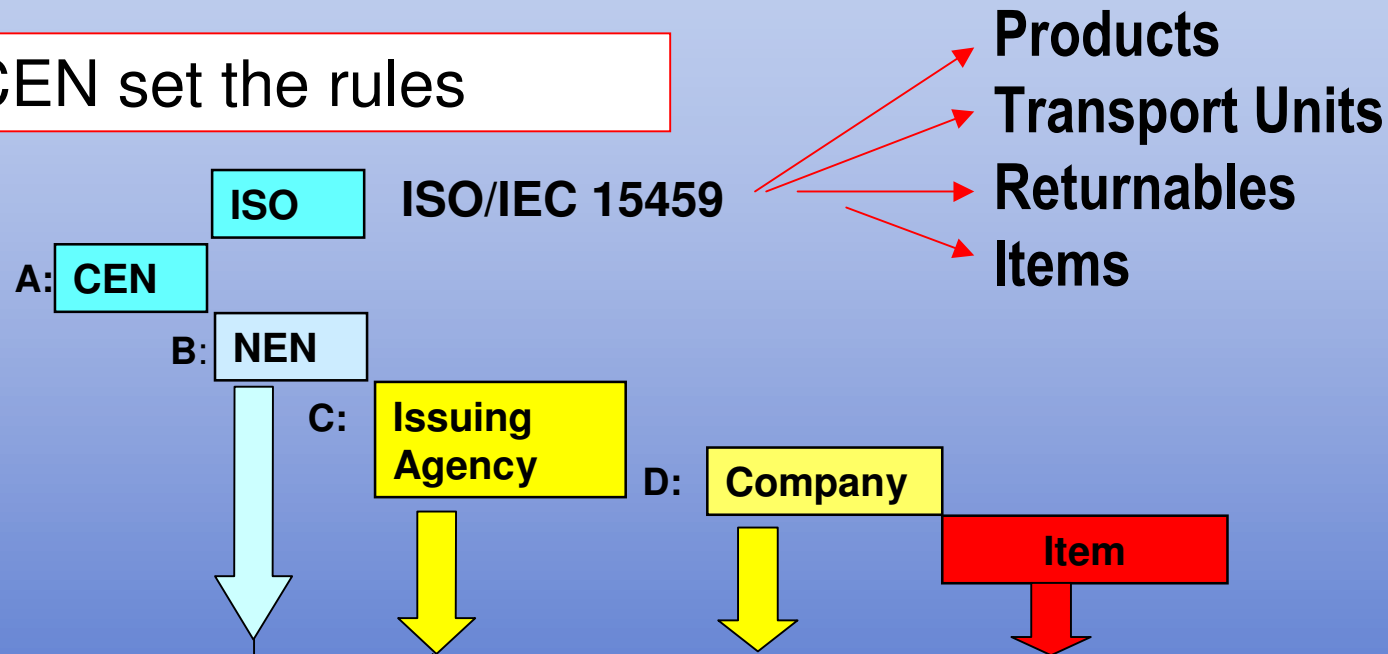
+ Company ID 0123456789012

+ Company ID 01234567890

but how to co-ordinate it....

ISO/IEC 15459 setting the rules for Uniqueness by ISO/IEC 15459 for all sectors

A) ISO&CEN set the rules



D) Company just add the Number

C) „IA“ issues the Company ID Code

B) NEN registers an „Issuing Agency Code“

Registered Issuing Agencies**Agency Code**

CEFIC-European Chemical Industry	QC
CEPE-Paper industries	PA
DUN-Dun&Bradstreet	UN
EAN International	0-9
EDIFICE-European Elektronik Industries	LE
EHIBCC-Health Care	LH
EuroExpress Logistics	UT
EUROFER-Steel Industrie	ST
FIATA-Transportation	LF
GD Express Worldwide NV	TN
IBM EMEA	VIB
NEDLLOYD-UNITRANS	ND
Norsk Edipro	KNO
ODETTE-Automotive Industries	OD
UPU-Universal Postal Union	J
PTT-NL Nederlands Post	NL
SIEMENS International	SI
VAN GENT&LOOS Intl.	VGL

The Register for the *Agencies

***issuing company codes**

*** www2.nen.nl/getfile?docName=196579**

ISO

ISO/IEC 15459

CEN

NEN

Issuing Agency

Company

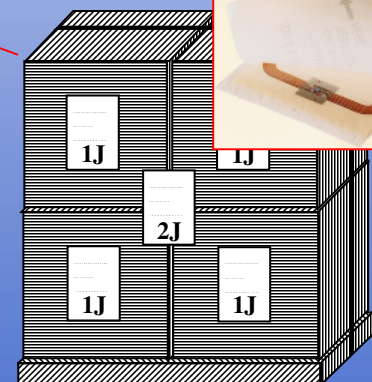
Vergabestellen für unikate Firmenkennungen

...the Company Identification Code is for:

CIN



Dispatch advise
Company: Smith
LIC: S321
1 Wahser 265781
3 Screws G95645
9 Parts X2659711



SIEMENS
SIMATIC S5

(1P) 6ES5 441 - 8MA11

(25S)LE SIE1320001R9

0,2A PILOT DUTY, 0,5a
5w TUNGSTEN MAX. 50 V, DC
CAUTION: USE WIRES-
SUITABLE FOR 75 °C

Made in Germany

www.elmicron.de

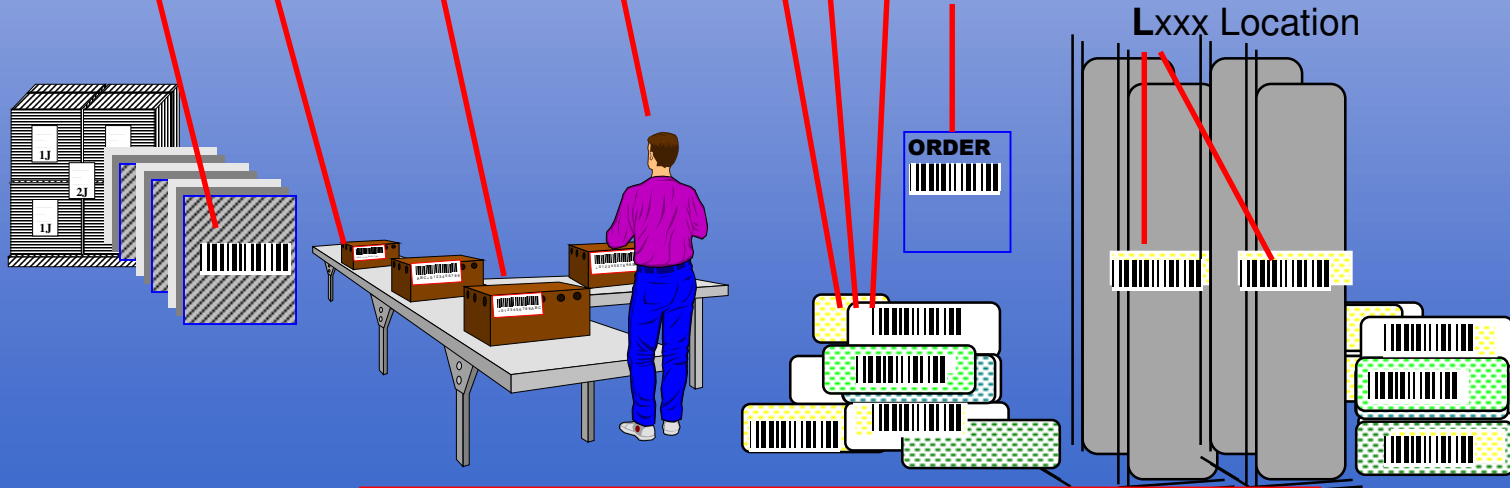
Seriennummer: 05050901

(25S)QCELM105050901

How to know what's in a Code?

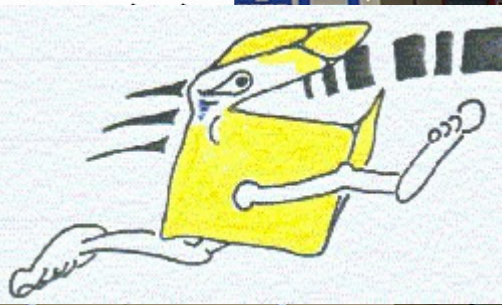
Flags name every code and tell what it is:

- **Jxxxx** (]C100xx with EAN-AI) Unique Transport Unit – **Agency/Company/Transportnr.**
- **1Bxxx** – Returnable Container ID
- **Sxxx** -- Seriennummer (oder 25S – **Agency/Company/Seriennummer**)
- **1Hxxx** -- Worker ID
- **25Pxxx** – **Agency/Company/Product** + 1Txxx Charge/Lot
- **+xxx** -- Company/**Product**/expiry/Charge
- **]C101xxx** – Company/**Product**
- **Kxxx** -- Referenz
- **Lxxx** Location



...that's ISO/IEC 15418

Barcode & RFID



Transport Unit's become unique..

...by a unique Transport Code



(J) Transporteinheit

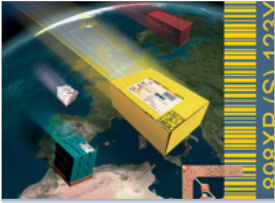
J=IAC for UPU
D00001=DHL 1
Serial No.

IAC
QC
PA
UN
0 - 9
LE
LH
ST
UT
LF
VIB
LA
OD
J

(J) JD0000130001234567



Option GS1 AI: (00)012345671234567890

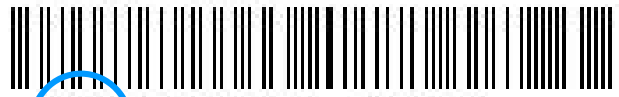


The Unique Product


- 1P** Product Code assigned by Supplier
- 25P** Unique Product Code: IAC+Company
- *01** Global Trade Item Number (GTIN) Fixed
- 1T** Suppliers Traceability number: LOT
- *10** Batch or Lot Number
- S** Serial Number
- *21** Serial Number
- 25S** Unique Serial Number: IAC+Company*Serial Number
-
- ..

SIEMENS



SIMATIC S5



(1P) 6ES5 441 - 8MA11



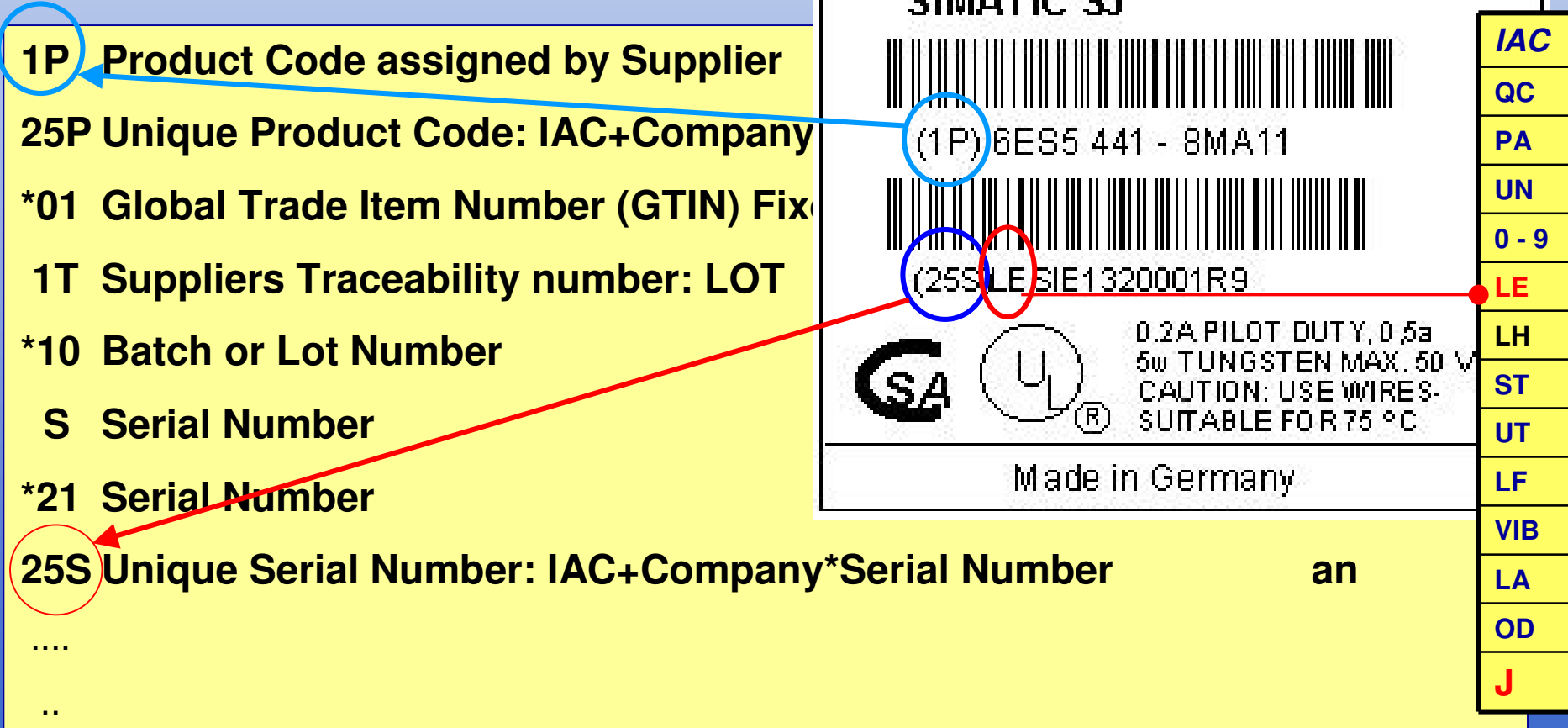
(25S) LE SIE1320001R9

0.2A PILOT DUTY, 0.5a
5w TUNGSTEN MAX. 50 V
CAUTION: USE WIRES-
SUITABLE FOR 75 °C

Made in Germany

IAC
QC
PA
UN
0 - 9
LE
LH
ST
UT
LF
VIB
LA
OD
J



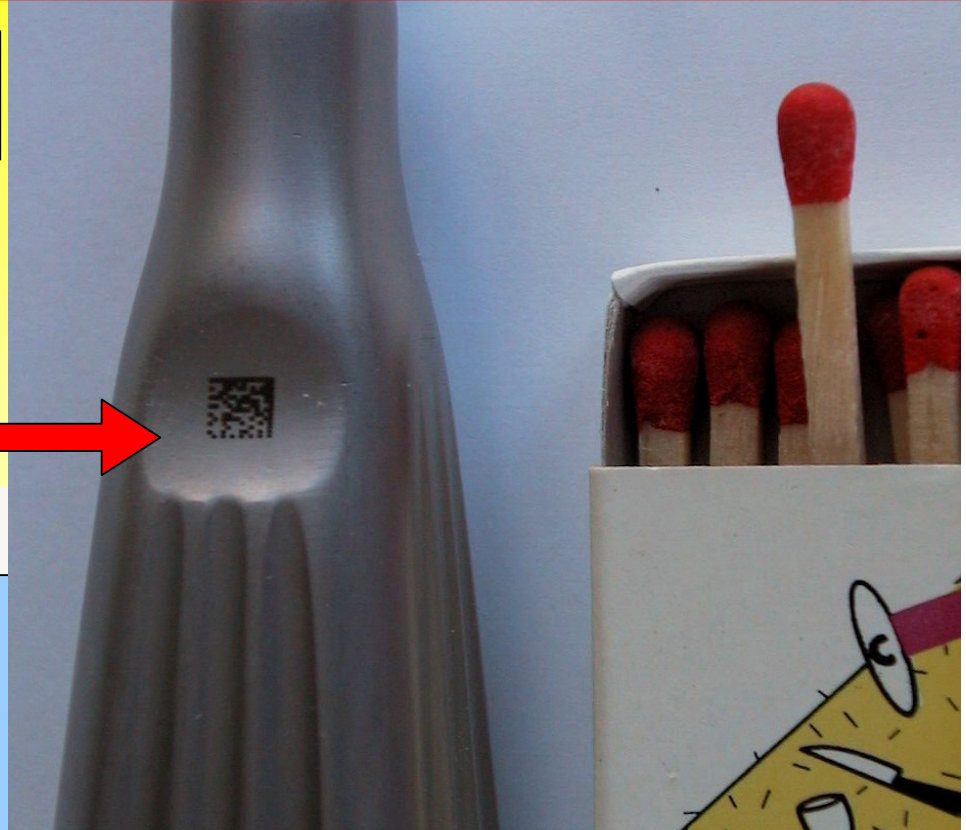
The unique ITEM

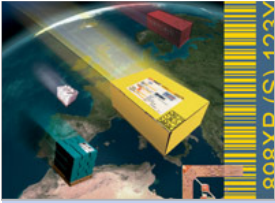
... identified by „DI (25S)“

IAC
QC
PA
UN
0 - 9
LE
LH
ST
UT
LF
VIB
LA
OD
J

25SLHE99912345678901

Seriennummer
E999 – Company Code
LH - Code EHIBCC Health Care
25S - DI Eindeutige Seriennummer





DIN Deutsches Institut für Normung e. V

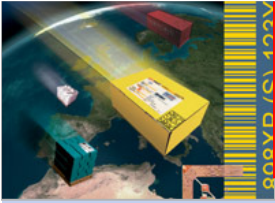
DIN V66401

UIM - The Unique Identification Mark

UIM - La Marque d'identification unique

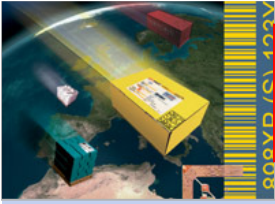
Application standard for very small items using matrix symbols

Norme d'application pour des objets miniatures avec codage matricielles.

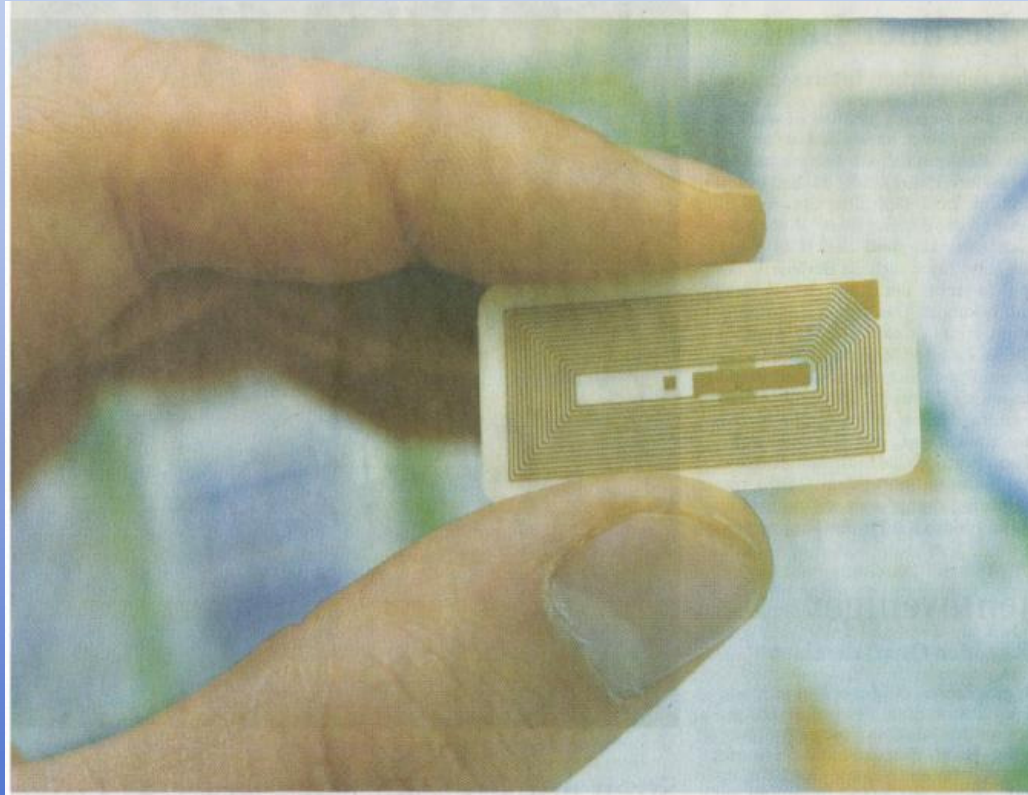


Now RFID comes in ...

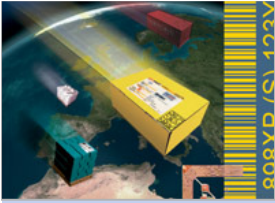




we all know, what RFID can do?

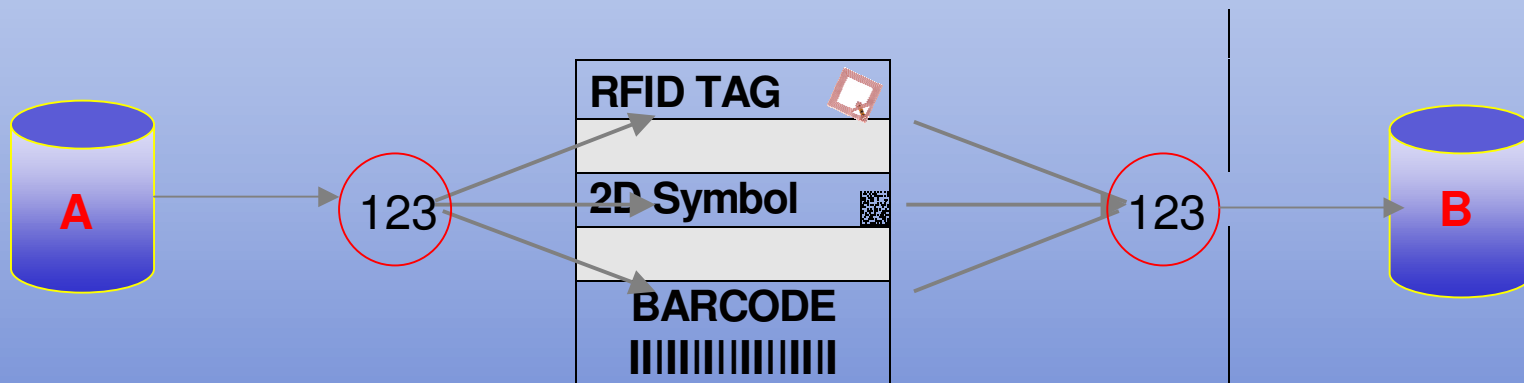


but do we need new numbers for RFID?



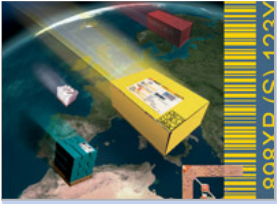
...is this a target:

To select a technology to carry the data



without changing the data?

or do we need/want to change the data?

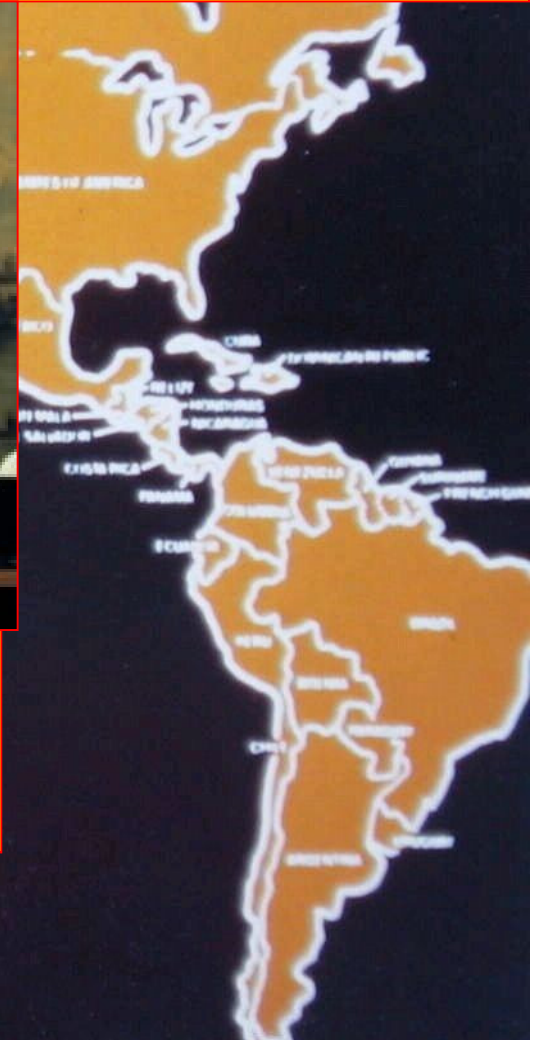


Same information - different carriers





YES, ISO/IEC and JWG's



**enable it world
wide**

ISO TC122/TC104/SC31

Vehicles

SEA Container

Returnable

Transport

Product

ITEM



Unit Load "Pallet"

Unit Load "Pallet"

Transport Unit

Transport Unit

Transport Unit

Pkg

Pkg

Pkg

Pkg

Pkg

Pkg

Item

Item

Item

Item

Item

Item

Item

Item

Item

Item

Item

Item

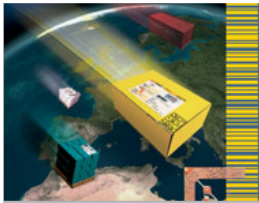
Freight Containers
ISO/CD 17363

Returnable Cont's
ISO/WD 17364

Transport Units
ISO/CD 17365

Product Packaging
ISO/CD 17366

Product Tagging
ISO/CD 17367



DRAFT INTERNATIONAL STANDARD ISO/DIS 17367

ISO/TC 122

Secretariat: TSE

Voting begins on:
2006-01-23

Voting terminates on:
2006-06-26

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Supply chain applications of RFID — Product tagging

Supply chain applications of RFID — Product packaging

Applications de chaîne d'approvisionnements de RFID — Empaquetage de produit

ICS 55.020

Supply chain applications of RFID — Transport units

Applications de chaîne d'approvisionnements de RFID — Unités de transport

ICS 55.020

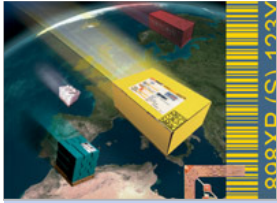
Supply chain applications of RFID — Returnable transport items (RTIs)

Applications de chaîne d'approvisionnements de RFID — Éléments restituables de transport (RTIs)

ICS 55.020

ISO/IEC JTC 1/SC31, 5. - 8. June, 2007, Pretoria



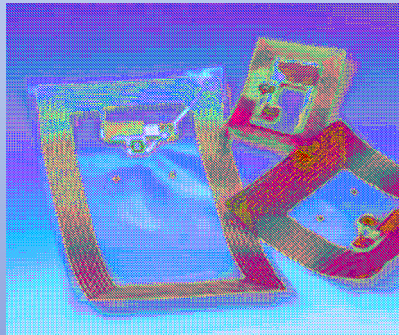


SC 31 RFID Work Items

ISO/IEC	Title	Assigned
15424	Data Carrier/Symbology Identifiers	WG 1
15418	GS1 AIs and ASC DIs	WG 2
15459	Unique Identifiers	WG 2
15434	Transfer Syntax for High Capacity ADC Media	WG 2
15961	RFID Data Objects	WG 2/4/SG 1
15962	RFID Data Syntax	WG 2/4/SG 1
15963	Unique ID of RF Tag	WG 2/4/SG 2
18000	RFID Air Interface	WG 4/SG 3
Part 1	Common Issues	
Part 2	<134 kHz	
Part 3	13.56 MHz	
Part 4	2.45 GHz	
Part 6	UHF	
18001	RFID Application Requirement Profiles	SC 31/WG 4
- - -	Conformance Standards	SC 31/WG 3



**New
ISO/IEC work item
from Korea:**

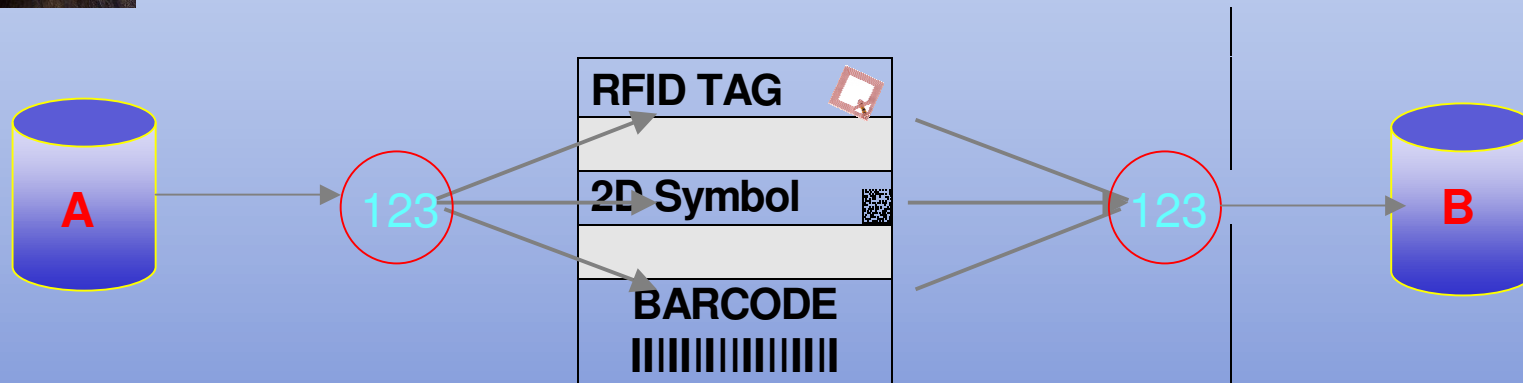


**Mobile item identification and management
in support of consumer applications.**

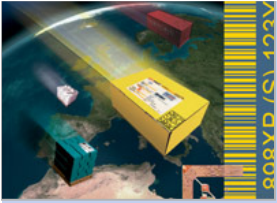
(Interfacing AIDC to Mobile phone systems)



New ISO/IEC work item supplied by Japan:



Harmonized data structure according to 15434
and ISO 15961 for all types of ADC media
covering linear symbols, 2-d symbols and RFID.



Japan's Contribution Report

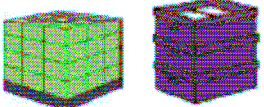
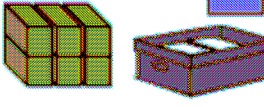

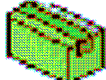
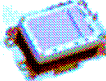

ISO/IEC JTC1 SC31 Plenary Meeting

June 8 2007, Pretoria

Yoshiki Endo
Ministry of Economy, Trade and Industry
(METI)

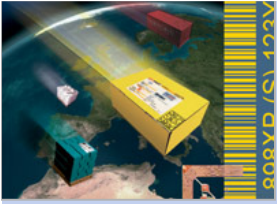
◆ International Standards on AIDC technologies for Item Identification

物品識別のための自動認識技術の国際規格

AIDC media Layer	Applicable International Standards 対象物への媒体使用時の規格		
	RFID (電子タグ)	Bar Code / 2D Symbol 1次元/2次元コード	
 Unit Load e.g. Pallets ハレット等の 輸送容器	ISO-17364	N/A	
 Transport Units 集合梱包	ISO-17365	ISO-15394	License Plate ▪ Shipping Labels ▪ GTL Global Transport Label 
 Individual Packaging 個装箱	ISO-17366	ISO-22742	▪ Packaging Labels
 Parts & Products 部品・製品	ISO-17367	ISO-28219	▪ Labels ▪ Direct Marking 

RFID must be co-usable with AIDC technologies already in use.

電子タグは、既に活用されている自動認識技術との並存が必須である。



Chances & Risk's

The standards enable interoperability, but the services supply the structure's

Registrierte Vergabestellen	IAC Kürzel	CIN Struktur	Nummernstruktur des Anwenders (Stellen im Code)		
				Produkt	Transport
CEFIC-	QC	4an	an	<20	<20
DUN-Dun&Bradstreet	UN	9n	an	<20	<20
EAN International (jetzt GS1)	0-9	7n	n	ca. 5	9
EDIFICE-Elektronikindustrie	LE	3an	an	<20	<20
EHIBCC-Gesundheitswesen	LH	4an	an	<13	<20
EUROFER-Stahlindustrie	ST	3an	an	<20	<20
usw.			n=numerisch, an=alphanumerisch		



Attention: EPC 96Bit - RFID Tag's



more does'nt fit in!

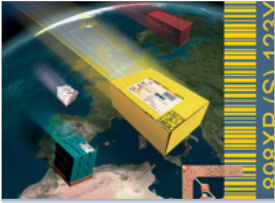


#####123456789012

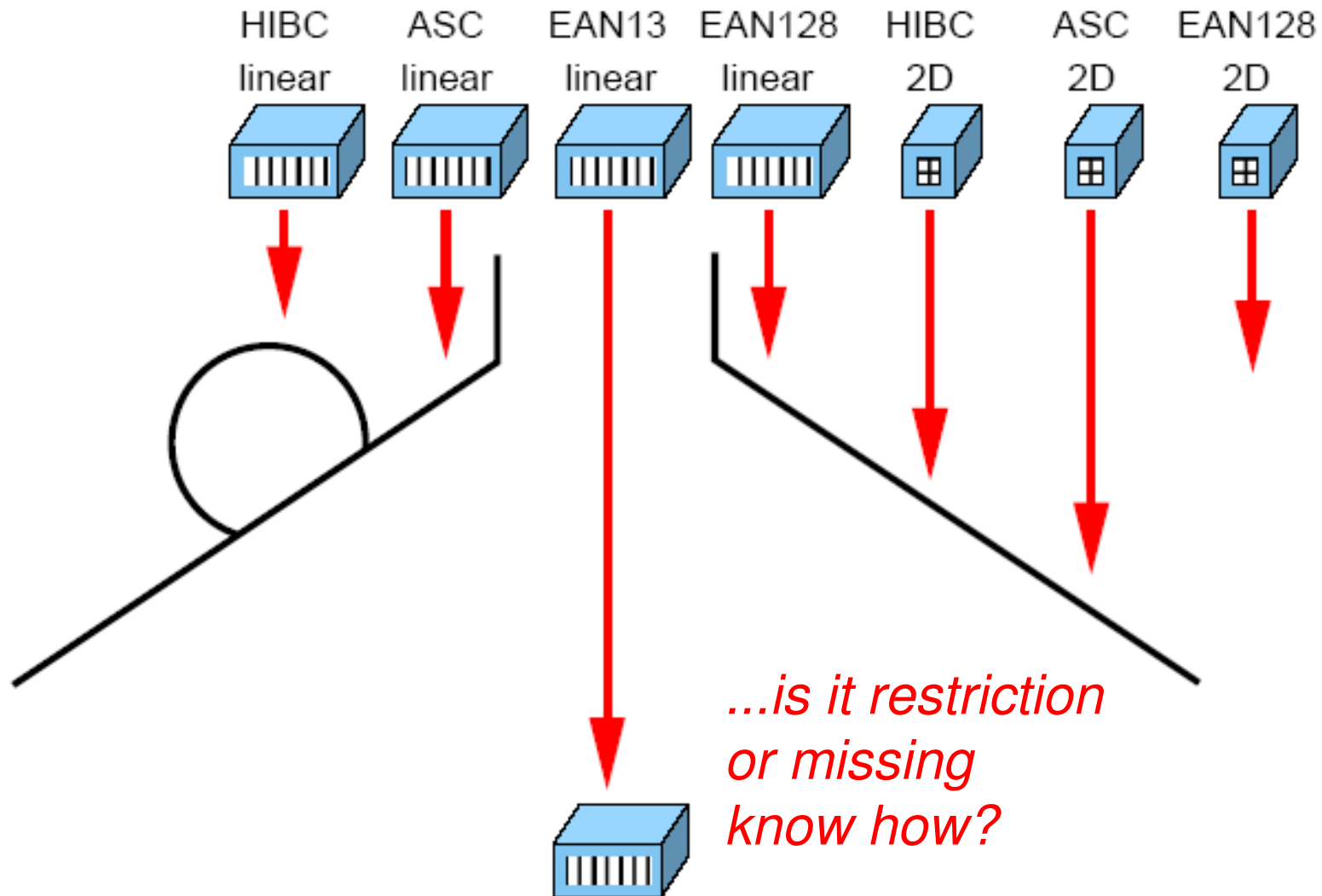
34567890

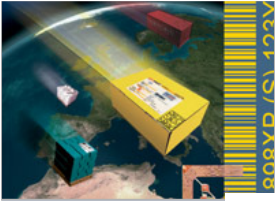


so if more: ISO/IEC 256,512,... Bit Tag's

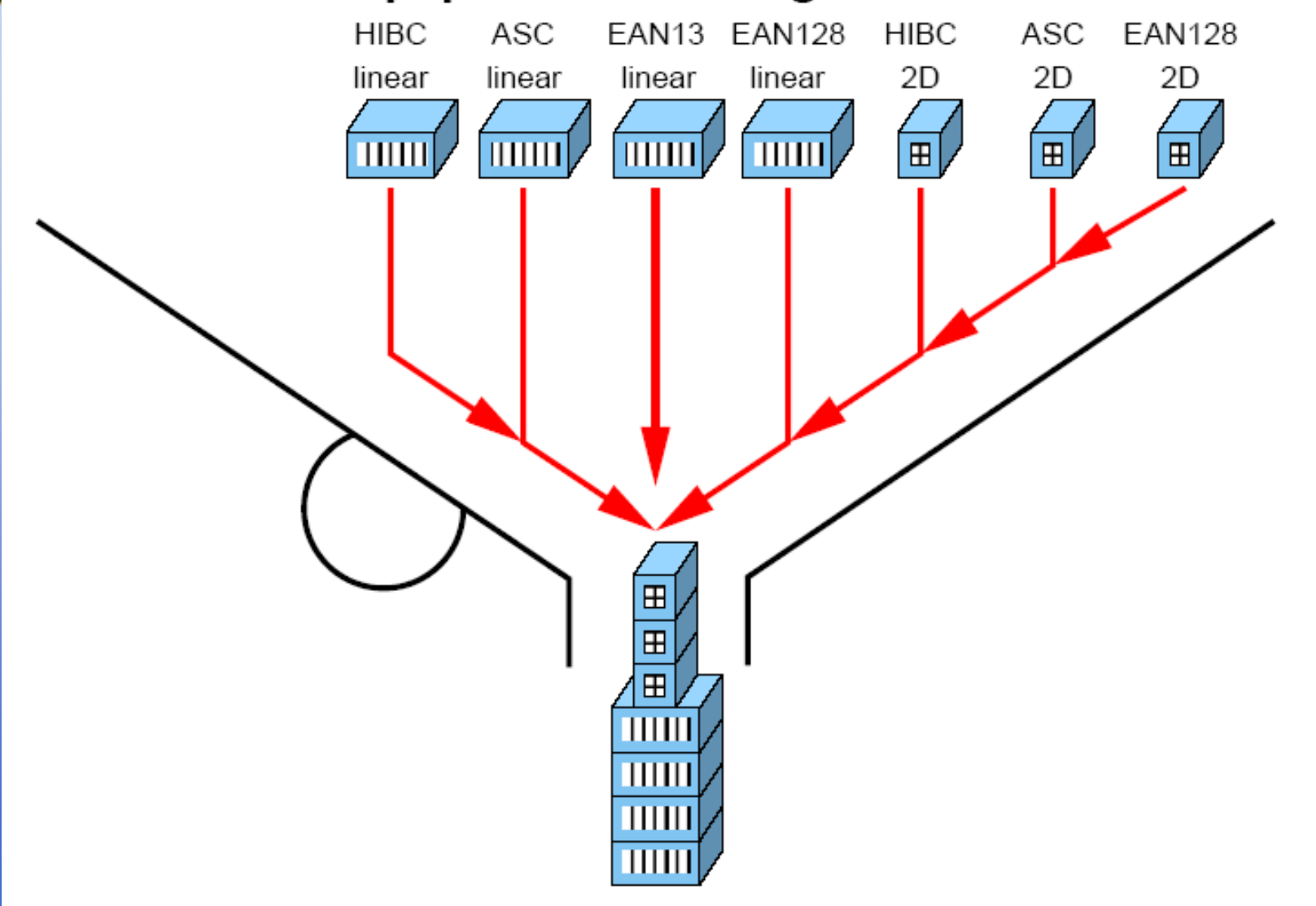


Restrictive strategies filter numbers out:



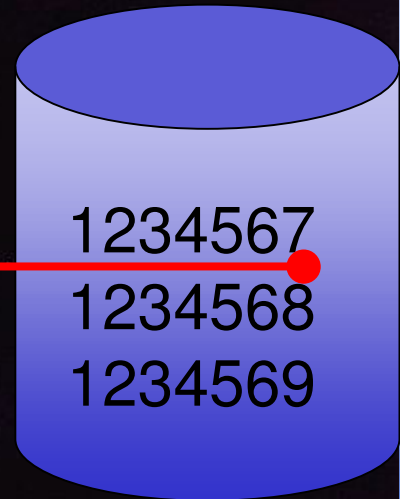
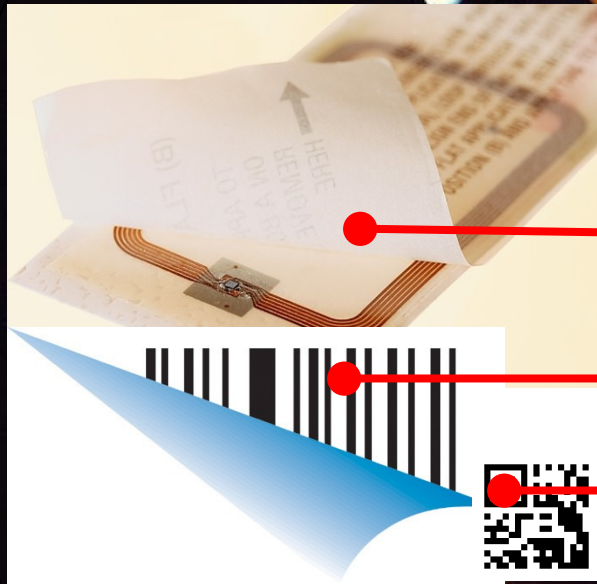


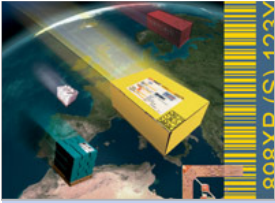
Scan it all - it works!



ISO powered: *Uniqueness & Interoperability*

What about alternative Idea's?



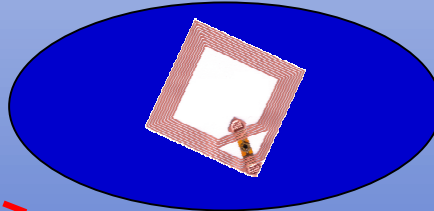


Data „real time“ with the object



*alpha numerics
with Variables:*

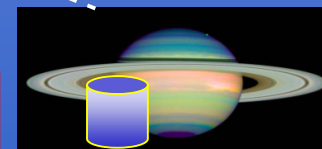
ISO



*or EAN/GS1
numbers*

without Variable

via connection to the „interenet of things“?



Info by third party

ISO/IEC solutions are most efficient

everywhere:

**No overlabelling
No duplication
No restrictions**

.... but UNIQUE





www.DIN.de
www.eurodatacouncil.org

Heinrich.Oehlmann@eurodatacouncil.org
phone: +49 3445 78116 0