The MIT 2008 Information Quality Industry Symposium

The NATO Codification System as the Foundation of the ECCMA Open Technical Dictionary

Logistics Data & IT Solutions
Defense Logistics Information Service

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Overview

- **History and basics of the NATO Codification System (NCS)**
- **The use and benefits of NCS data**
- **Case studies**
- **How the NCS laid the foundation for the ECCMA Open Technical Dictionary (eOTD)**
- **Video: The importance of using the right name!**

What Is the Purpose of Codification?

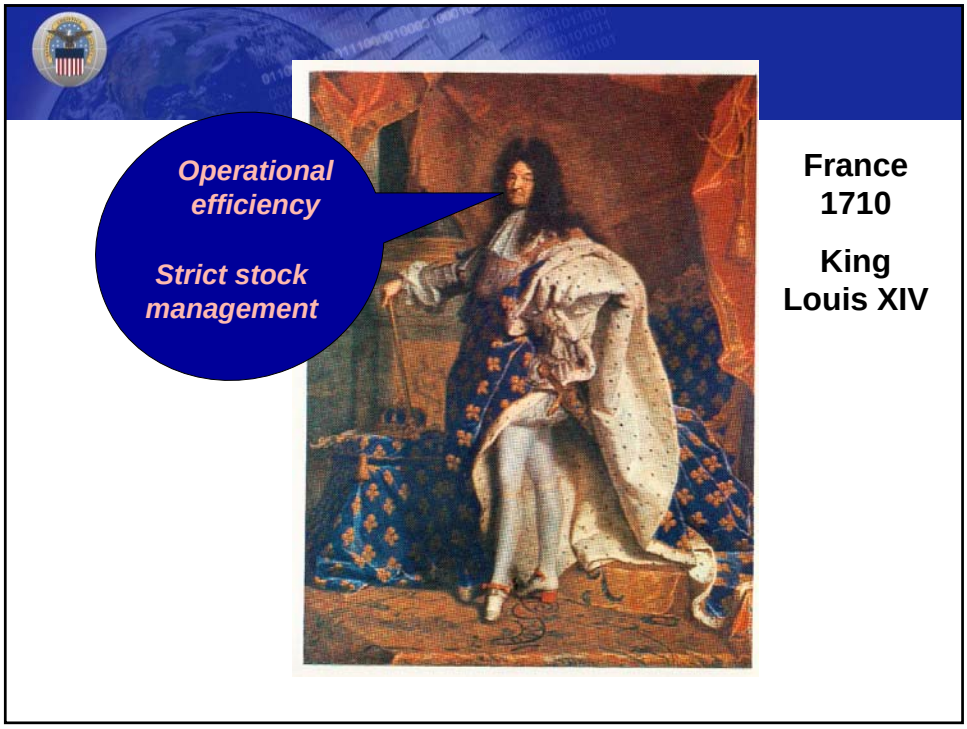
- **To establish a common supply language throughout all logistic operations**
- **Language independence: All aspects of the item identification and description can be stored and exchanged in an encoded format**
- **To enable interoperability**
- **To optimize resource management by minimizing duplication in inventories**

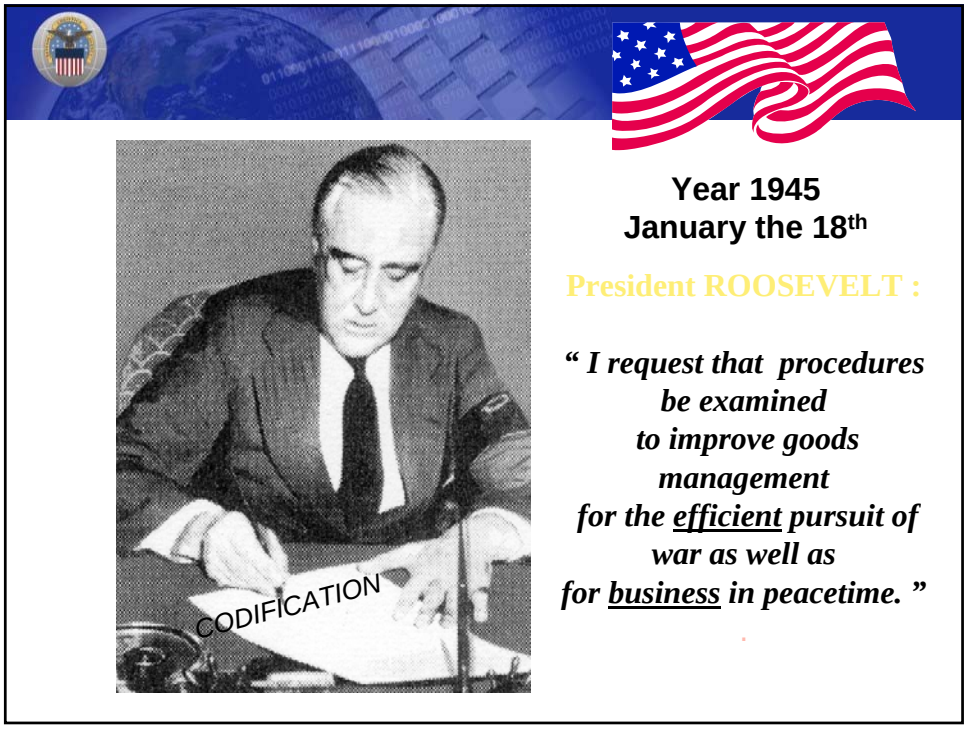
Cataloging = Codification

Prince Maurits of Nassau-Orange

Simon Stevin

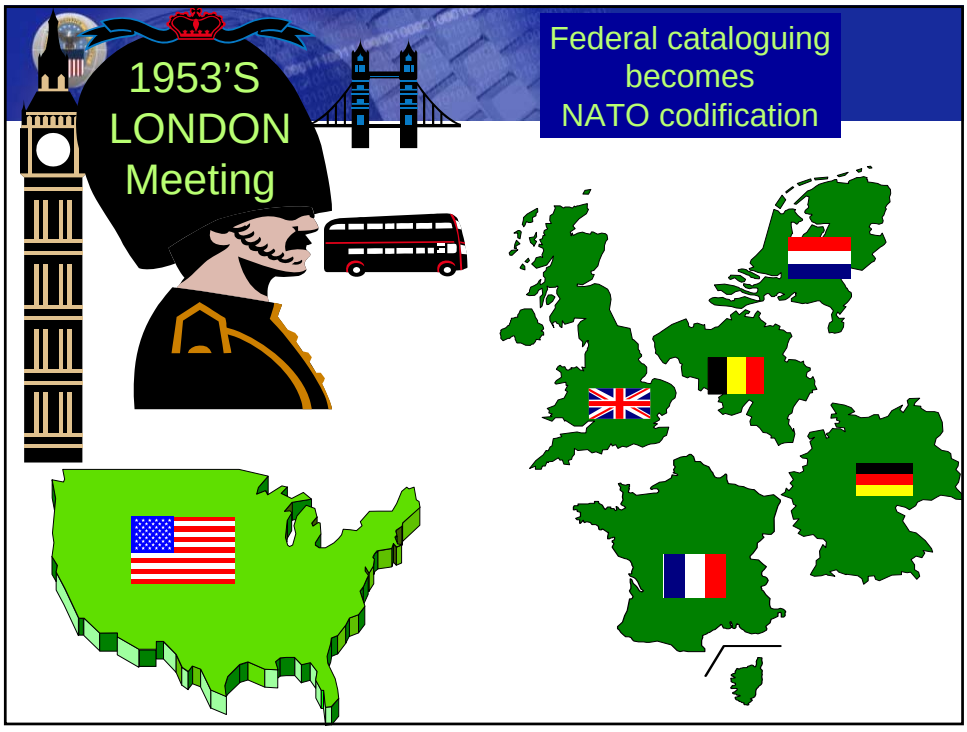
Dutch Scientist


Operational efficiency
Strict stock management
France
1710
King
Louis XIV


CODIFICATION
Year 1945
January the 18th
President ROOSEVELT :
" I request that procedures be examined to improve goods management for the efficient pursuit of war as well as for business in peacetime. "

Creation of NATO Alliance

- **Political cooperation…**
  - **Language problem!**
- **Military cooperation…**
  - **Language problem!**
  - **Language of logistics also a major problem**
  - **Each nation and even, each Armed Forces had some type of codification system**



Codification Chronology

WWII

1945

1949 PL152 SUPPLY CLASSIFICATION

US/UK/CA CLASSIFICATION

1952 PL436 CODIFICATION SYSTEM

1954 STANAG 3150

NATO

1956 STANAG 3151

1966 DLSC

1974 NCB CODE

DESERT STORM

1978

1991 PFP

1994 PACS

BASELOG

1999

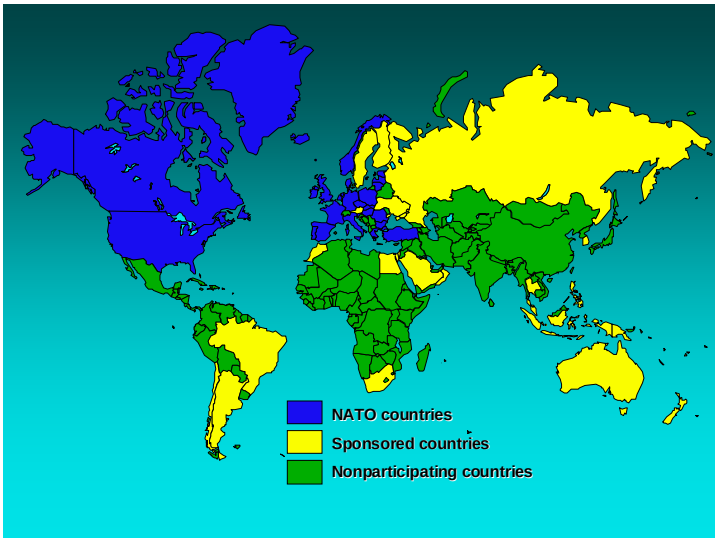
e-Commerce

2002

eOTD / ISO

2007

NATO Codification System Users Map



The NATO Codification System

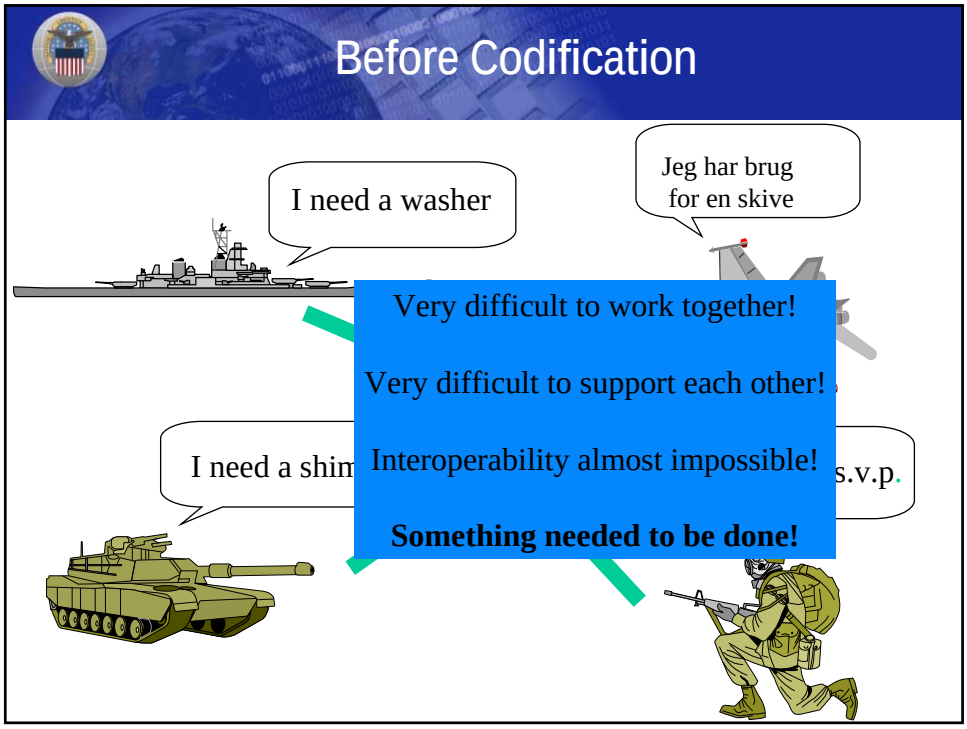
- **A set of rules and regulations that enable 26 NATO countries and 28 non-NATO nations to exchange logistic information about 16 million items of supply**
- **A flexible distributed information system that can be tailored to national requirements**

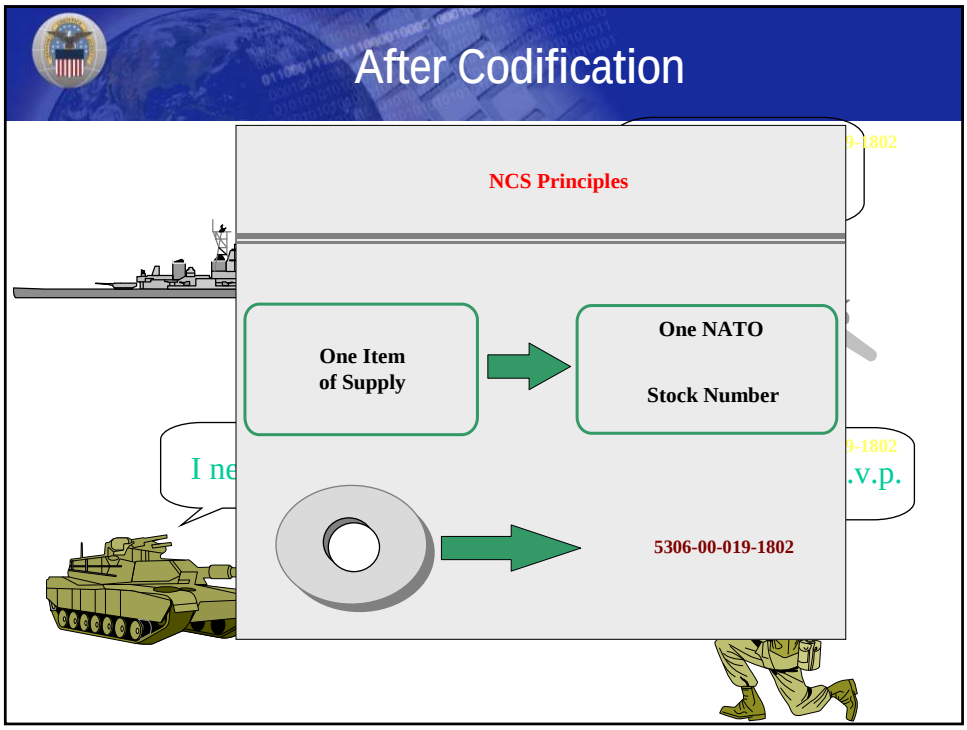
The NATO Codification System

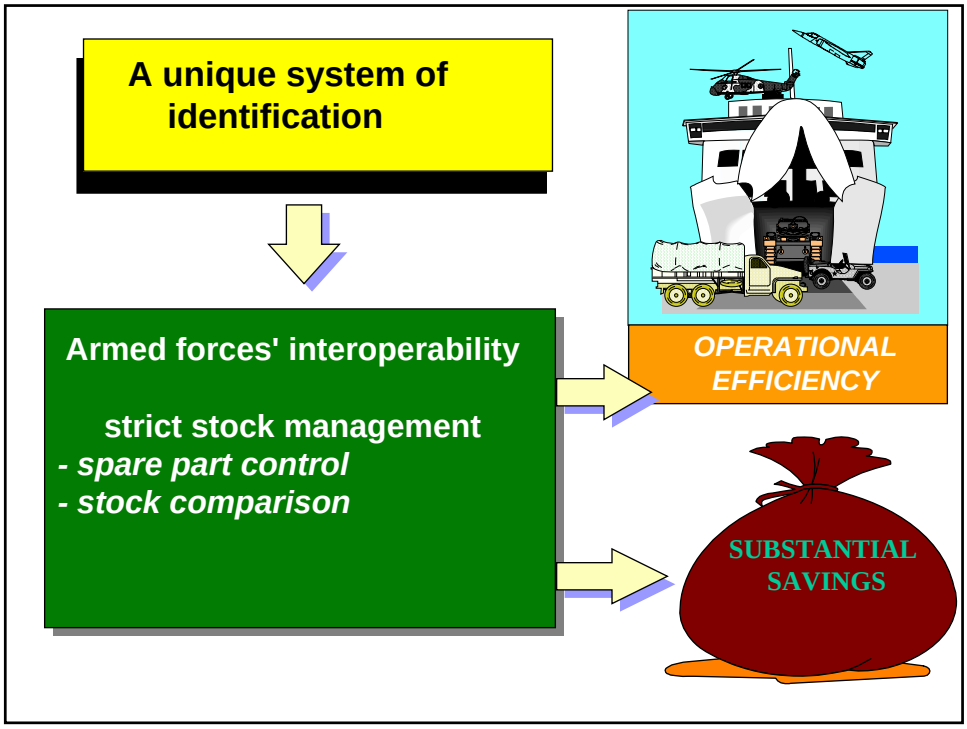
To facilitate logistic (co-)operation by using a uniform and common system for:

Identification
Classification
Stock Numbering

of items of supply


Before Codification
I need a washer
Jeg har brug for en skive
Very difficult to work together!
Very difficult to support each other!
Interoperability almost impossible!
Something needed to be done!
I need a shim
s.v.p.


After Codification
NCS Principles
One Item of Supply
One NATO Stock Number
5306-00-019-1802



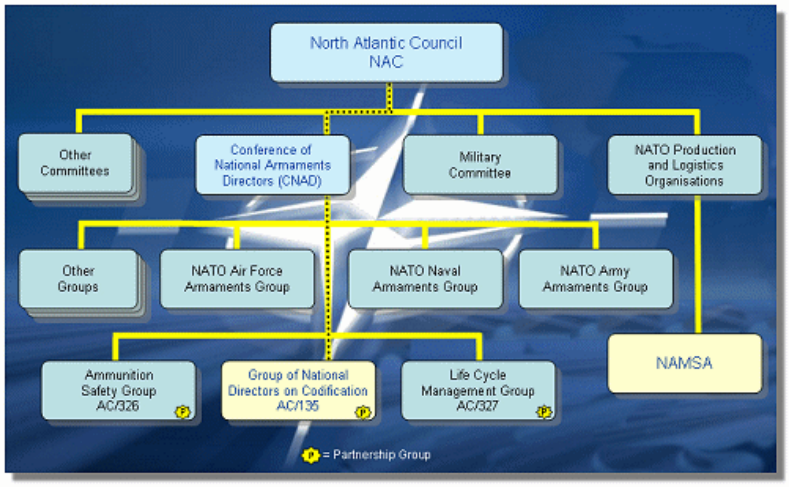
The NATO Codification System

- **Assignment of a uniform Item Name to an item of supply**
- **Use of a uniform system of classification of items of supply (STANAG 3150)**
- **Use of a uniform system of identification of items of supply (STANAG 3151)**

NATO Allied Committee 135 Mission

- **Provide a forum for discussion on policy matters concerning the NCS**
- **Review the progress in the implementation and application of the NCS**
- **Establish common regulations and procedures for NATO Codification**

Organization

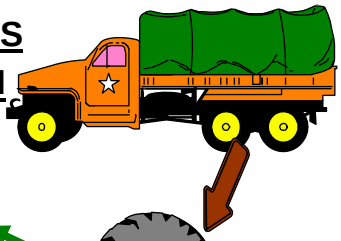


What Is a NATO Stock Number?

- NATO Stock Numbers represent item of supply concepts rather than an items of production
- An item of supply concept represents a cluster of characteristics related to form, fit, and function
- Many items of production may fit a single item of supply concept

NATO Stock Number (NSN)

MANUFACTURERS IDENTIFICATION SYSTEM



USERS CODIFICATION SYSTEM

NAVY
ARMY
AIR FORCE
OTHER
COUNTRIES

DUNLOP
11-00-20SPTGM

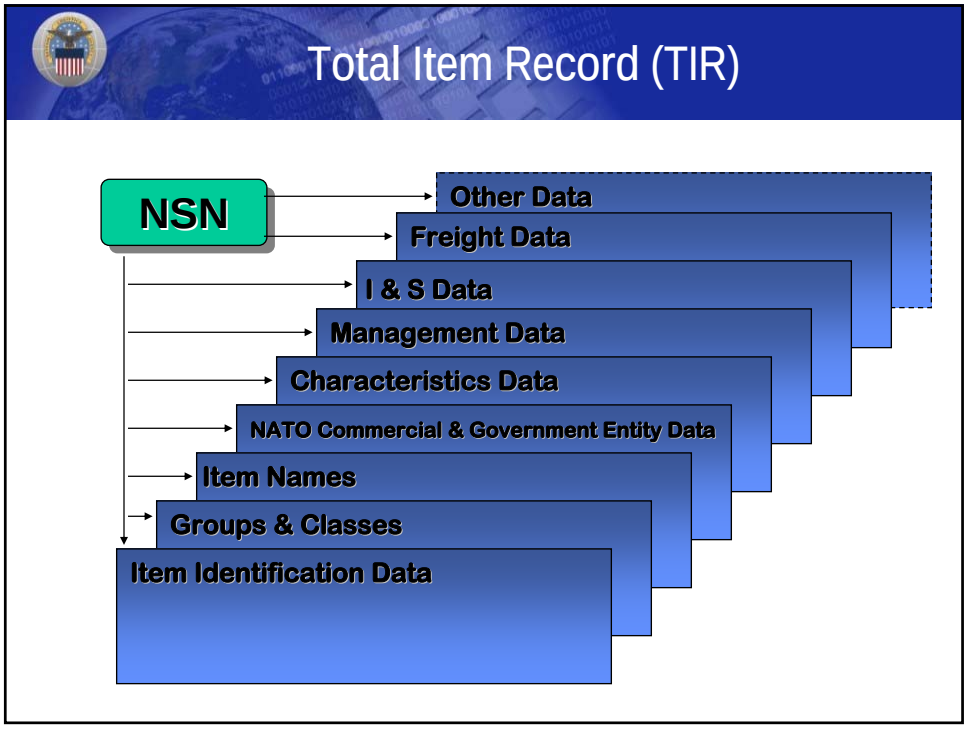
GOODYEAR TIRE CO
11-00-20SRLER

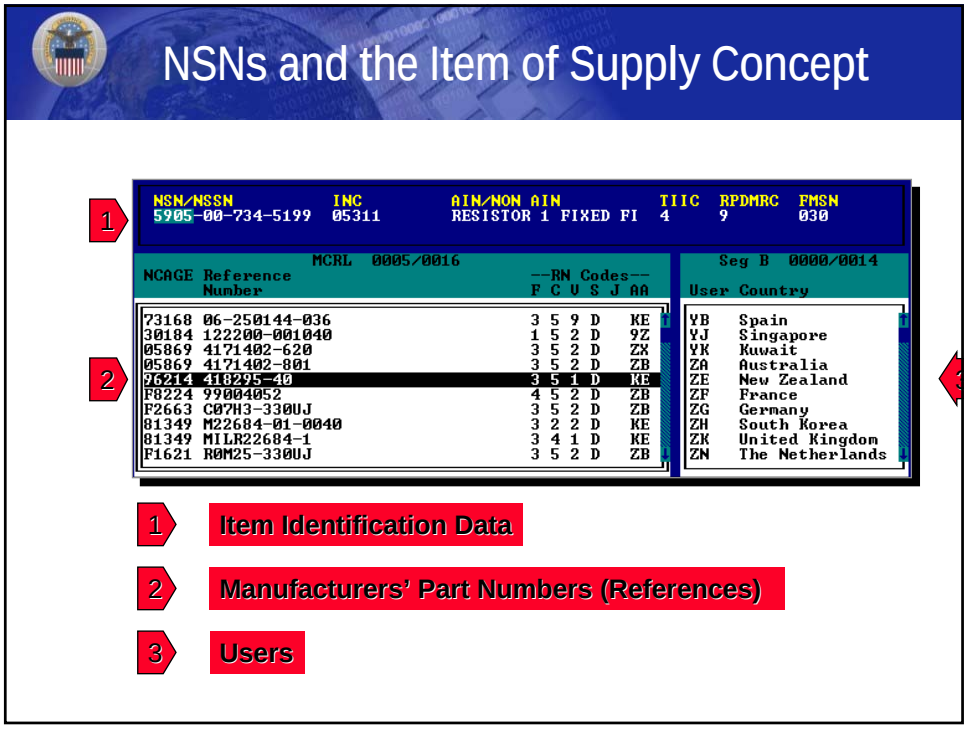
GOODYEAR FRANCE
11-00-20UNISRL

CUP SNC
1100R20GSRT4-16PR

2610-14-3224604

Single Stock Number


Total Item Record (TIR)
NSN
Other Data
Freight Data
I & S Data
Management Data
Characteristics Data
NATO Commercial & Government Entity Data
Item Names
Groups & Classes
Item Identification Data


NSNs and the Item of Supply Concept
NSN/NSSN INC AIN/NON AIN TIIC RPDMRC FMSN
5905-00-734-5199 05311 RESISTOR 1 FIXED FI 4 9 030
MCRL 0005/0016
NCAGE Reference Number
--RN Codes-- F C V S J AA
73168 06-250144-036 3 5 9 D KE
30184 122200-001040 1 5 2 D 9Z
05869 4171402-620 3 5 2 D ZK
05869 4171402-801 3 5 2 D ZB
96214 418295-40 3 5 1 D KE
F8224 99004052 4 5 2 D ZB
F2663 C07H3-330UJ 3 5 2 D ZB
81349 M22684-01-0040 3 2 2 D KE
81349 MILR22684-1 3 4 1 D KE
F1621 R0M25-330UJ 3 5 2 D ZB
Seg B 0000/0014
User Country
YB Spain
YJ Singapore
YK Kuwait
ZA Australia
ZE New Zealand
ZF France
ZG Germany
ZH South Korea
ZK United Kingdom
ZN The Netherlands
1
2
1 Item Identification Data
2 Manufacturers' Part Numbers (References)
3 Users

WebFLIS
Federal Logistics Information System

WebFLIS Home | 4/9/2008 1:22:35 PM

WebFLIS National Stock Number (NSN) Output Data

Search again?

NSN:	8040001449774 (Warfighter Search)
Item Name:	ADHESIVE
Query Type:	PUBLIC
Date of query:	4/9/2008 1:22:35 PM

Note: This is a representative picture only, of this item.

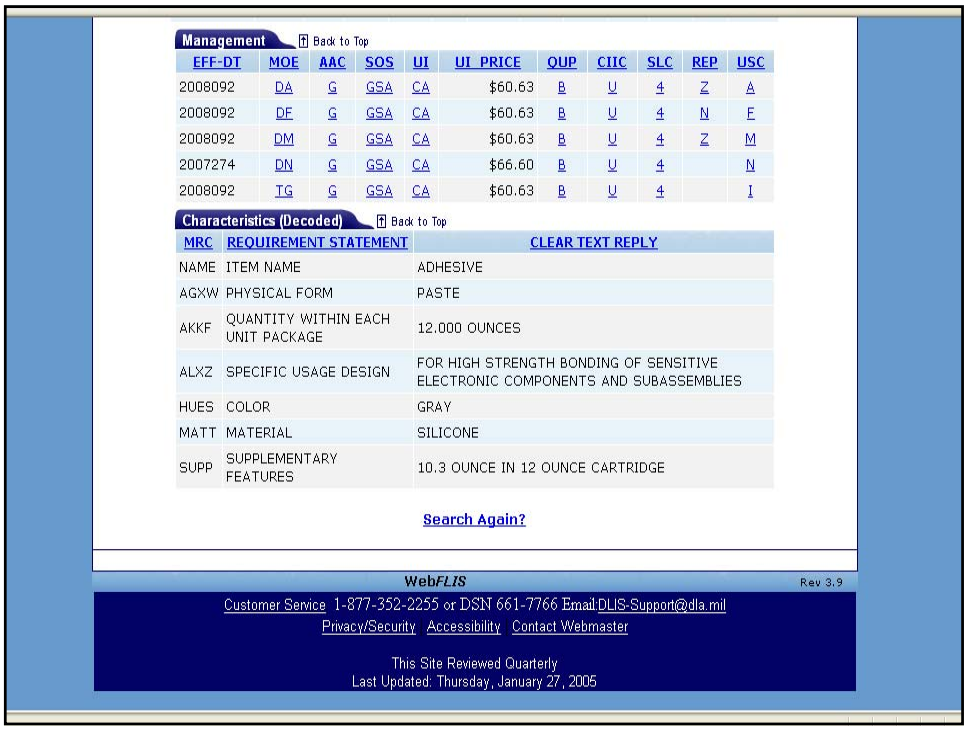
Identification Back to Top

FIIG	INC	CRIT CD	II	RPD MRC	DMIL	DMIL INT CD	NIIN ASGMT	PMIC	ADP	ESD EMI	HMIC	HCC
A535P0	11297	X	1		A	1	1969043	A			Y	

SCHEDULE B:	
ENAC:	

Reference/Part Number Back to Top

REF/PN	CAGE-CD	STAT	RNCC	RNVC	DAC	RNAAC	RNFC	RNSC	RNJC	SADC	HCC	MSDS
985310-3	00752	A	5	1	4	ZZ						
RTV189	01139	A	5	9	4	ZZ		B			N1	BDBZH
SM10192-02	07690	A	5	9	6	ZZ		B				
15567-002	10138	A	5	1	4	75						
P15-3145-	14304	A	5	2	5	9Z	4	D				



Management Back to Top

EFF-DT	MOE	AAC	SOS	UI	UI PRICE	QUP	CIIC	SLC	REP	USC
2008092	DA	G	GSA	CA	$60.63	B	U	4	Z	A
2008092	DF	G	GSA	CA	$60.63	B	U	4	N	F
2008092	DM	G	GSA	CA	$60.63	B	U	4	Z	M
2007274	DN	G	GSA	CA	$66.60	B	U	4		N
2008092	TG	G	GSA	CA	$60.63	B	U	4		I

Characteristics (Decoded) Back to Top

MRC	REQUIREMENT STATEMENT	CLEAR TEXT REPLY
NAME	ITEM NAME	ADHESIVE
AGXW	PHYSICAL FORM	PASTE
AKKF	QUANTITY WITHIN EACH UNIT PACKAGE	12.000 OUNCES
ALXZ	SPECIFIC USAGE DESIGN	FOR HIGH STRENGTH BONDING OF SENSITIVE ELECTRONIC COMPONENTS AND SUBASSEMBLIES
HUES	COLOR	GRAY
MATT	MATERIAL	SILICONE
SUPP	SUPPLEMENTARY FEATURES	10.3 OUNCE IN 12 OUNCE CARTRIDGE

Search Again?

WebFLIS Rev 3.9

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Privacy/Security Accessibility Contact Webmaster

This Site Reviewed Quarterly
Last Updated: Thursday, January 27, 2005

NCS Statistics

- **Approximately 16 million NATO Stock Numbers have been assigned**
- **Approximately 7 million by the U.S. and 9 million by the other NATO countries**
- **Approximately 30 million reference numbers have been registered on these NSNs**
- **Approximately 1.5 million manufacturers and other organizations are registered**
- **These NSNs contain more than 31 million user registrations**

The Scope of the NCS

- **More than 47,000 structured and defined Item Names**
- **More than 27,000 properties to describe items**
- **More than 150,000 property values to discriminate one item from another**

NSNs Are Assigned to Spare Parts

A-10

32,254 NSNs

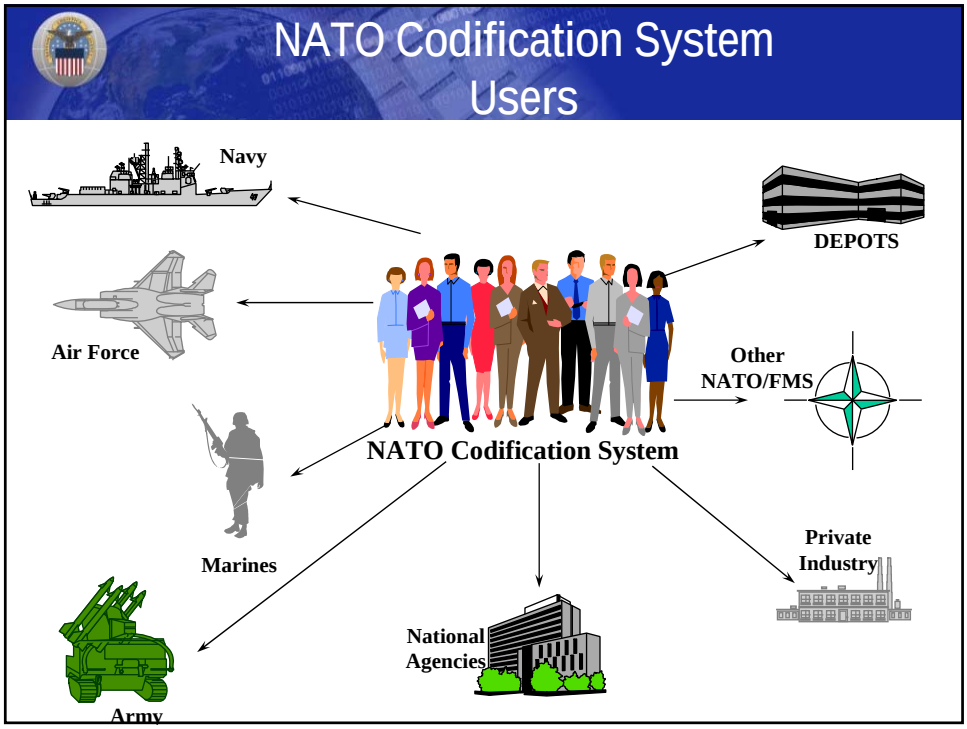
M1A1 21,415 NSNs

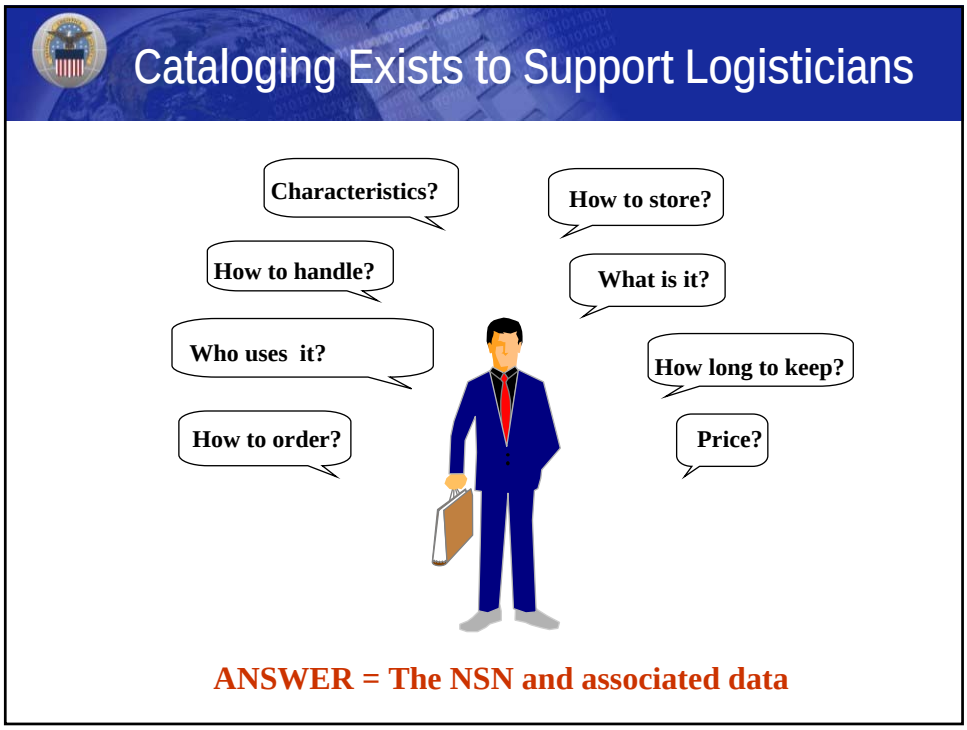
HUMMV

14,655 NSNs

What Is Codified?

- **Everything needed by soldiers, sailors, airmen, and marines**
- **Everything needed by all sectors of government, including, office supplies, parts for space vehicles, toiletries, computer equipment, and fuels**


NATO Codification System Users
Navy
DEPOTS
Air Force
Other NATO/FMS
NATO Codification System
Marines
Private Industry
National Agencies
Army


Cataloging Exists to Support Logisticians
Characteristics?
How to store?
How to handle?
What is it?
Who uses it?
How long to keep?
How to order?
Price?
ANSWER = The NSN and associated data

Cataloging Link With Logistics

Q: **ACQUISITION**

What is the part number of known items?

"What should we call this?"

"Which NATO supply class?

"Who manufactures this item?"

"Is it already stock listed?"

A: **CATALOGING**

- **NATO Stock Number (NSN) records provide:**
  - **-- past sources of procurement**
  - **-- identification of the item**
  - **-- cost of the item**
  - **-- record of key logistics decisions**
- **NSN is key to other procurement information**

Cataloging Link With Logistics

Q: **SUPPLY MANAGEMENT**

"What's the last recorded price?"

What is the unit of issue?

Can another item be substituted?

What is the acquisition advice code??

A: **CATALOGING**

- Records initial logistics support decisions
- Records changes to those decisions throughout life cycle
- Provides means to notify all users of changes
- Offers flexibility
- Is a single, comprehensive source of information needed to manage items

Cataloging Link With Logistics

Q: **MAINTENANCE**

"What is it?"

What is the part number?

What is the NSN so I can order it?

What is the CAGE?

A: **CATALOGING**

- **Takes the "wrench turner" from repair manual to the supply system**
- **Provides information on alternate sources, substitutable parts, interchangeability, and so forth**
- **Shows who manages the spares, how they're managed, how much they cost, unit of issue, and so forth**

Cataloging Link With Logistics

Q: **STORAGE & DISTRIBUTION**

Does it contain hazardous material?

Who is the manufacturer?

What are the packaging requirements?

What is the unit of issue?

What are the freight requirements?

Is there risk of theft?

What is its value ($)?

Should it be demilitarized?

A: **CATALOGING**

- **Indicates hazardous material content, precious metals content, physical security requirements, other characteristics**
- **Is flexible to meet national requirements for storage & distribution**

Cataloging Link With Logistics

Q: **DISPOSAL**

"What is it?" How can I identify this item?

What is the unit of issue? Is it hazardous?

Should it be demilitarized?

How should it be stored?

A: **CATALOGING**

- **Helps identify unknown items.**
- **Provides Demilitarization information**
- **Provides information about hazardous material**
- **Helps ensure environmentally sound disposal**
- **Provides storage information**

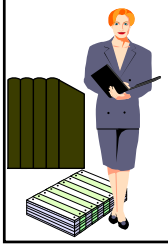
Benefits of the NATO Codification System

BEFORE

More Inventory + Multiple Procurements + No Visibility of Assets Across Services = Wasted Resources

- **Standard Data Elements**
- **Item of Supply Concept**
- **Single Manager**

AFTER



Less Inventory + Consolidated Buys + Sharing Of Assets = More Effective Force

Operational Advantages of NATO Codification

- Interoperability
- Stock control
- Reduction of distribution networks
- Prompt satisfaction of user needs
- Facilitates technical dialogue
- Easily accessible data
- Standardization of material
- Knowledge of resources
- Accurate description of items
- Common language
- Computerization

Economic Advantages of NATO Codification

- Savings realized on production of new items
- Consolidation of orders
  Diversity of suppliers
- Reduction of spare parts
- Stock reduction
- Inventory transfer options
- Adaptable to technological changes
- Use of already identified components
- Widespread knowledge of existing material
- Limitation on range of equipment
- Elimination of duplicates
- Accurate identification of items

Benefits of the NCS

- Operational

- Economic

- Flexibility

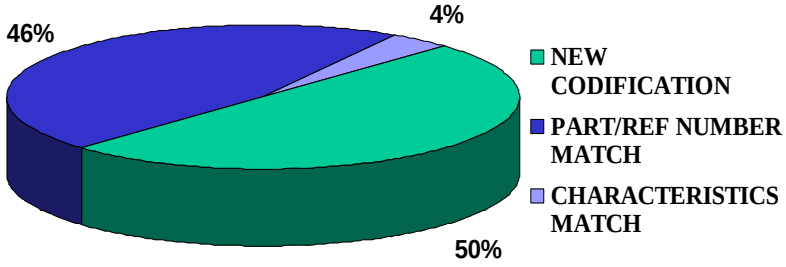
- Interoperability

Relations With Industry

Environment

Benefits: United Kingdom Study

Of the 200.000 new Items offered to the UK NCB for Codification each year approximately 50% are already codified and have been allocated a NSN.



DLO
Defence Logistics Organisation

Singapore Study: The NCS Adds Value to Supply Chain Management

Item Entry Control

- **Prevents unnecessary inventory growth and item duplication. Items managed by NSNs instead of manufacturers part numbers**
- **Savings in warehousing and item management fees (supply bases managed by contractors, charge $150/line item/yr)**
- **About 25% of new items detected with existing NSNs each year (5-7,000 items or savings of >$750K/yr)**

Singapore Study: The NCS Adds Value to Supply Chain Management

OEM Part Number Breakout

- **Seek out true manufacturers and their part numbers**
- **Promotes competitive bidding during procurement, leading to lower prices. OEM prices can be 30% lower than prime contractors prices**

DSTA
Defence Science & Technology Agency

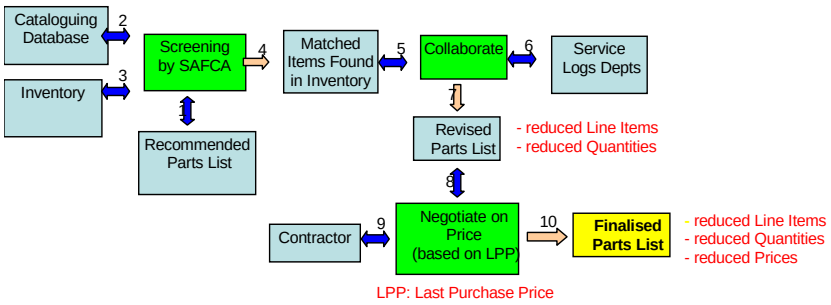
Singapore Study: The NCS Adds Value to Supply Chain Management

Pre-Provisioning Screening

- Items procurement intends to purchase screened against existing inventory for dead/surplus stocks to be released.

- Comparison of last purchase price to help negotiate for better pricing. Recent aircraft project, high value items >US$10K per item screened against NSN file. Difference >US$4M (for 156 items) between contractor & NSN prices.

Pre-Provisioning Screening



Can Surplus Stocks Be Released ?

What is the Last Purchase Price?

Singapore Study: The NCS Adds Value to Supply Chain Management

- **Million Dollar Project Award - International Exposition of Innovation and Quality Circles 2005**

Case Study: Codification In Bosnia Peacekeeping

- **Logistics operations under UN deficient because of a lack of a common technical language**
- **Many unneeded spare parts delivered under perilous conditions**
- **NATO forces found NCS of great benefit after NATO takeover**

ECCMA
electronic commerce code management association

An international non-profit membership association of industry and government master data managers and their application or service providers

Our Mission

To increase the quality and lower the cost of descriptions through developing and promoting the implementation of International Standards for Master Data Quality

Aims and Objectives

- **DLIS and AC/135 undertook the partnership with ECCMA and involvement with ISO for the following reasons:**
  - **To automate the codification process**
  - **To improve the quality and availability of data**
  - **To help align the NCS with international standards**
  - **To increase cooperation with industry**

NATO CODIFICATION
AC/135

ECCMA
electronic commerce code management association

Military/Commercial Bridge

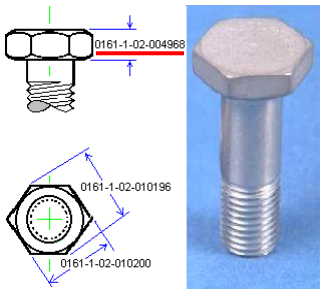
"There is and always has been a philosophical gulf between the application of cataloging for military purposes and … for commercial. …commercial practices are not precise enough to support cost-effective military inventory management and military cataloging is far too detailed and costly for commercial purposes …ECCMA offers a way to bridge the gulf" - Mr. Alan Williams, Assistant Deputy Minister, Canadian Department of National Defence

The ECCMA Open Technical Dictionary

- **The ECCMA Open Technical Dictionary (eOTD) is an open technical dictionary of cataloging concepts used to create unambiguous language independent descriptions of *individuals, organizations, locations, goods and services***
- **The ECCMA Open Technical Dictionary (eOTD) is based on the NATO Codification System (NCS) with a more modern database architecture oriented toward the commercial world**

eOTD
ECCMA Open
Technical Dictionary

Common Terminology = Common Mapping



Property ID	Value	Measure ID
0161-1#02-046898#1	0161-1#07-014684#1	
0161-1#02-027375#1	3225020037	
0161-1#02-023822#1	1.0	0161-1#05-000798#1
0161-1#02-010200#1	1.450	0161-1#05-000798#1
0161-1#02-010196#1	1.653	0161-1#05-000798#1
0161-1#02-004968#1	0.591	0161-1#05-000798#1
0161-1#02-027376#1	10	
0161-1#02-027378#1	0.80	0161-1#08-000168#1

eOTD Identifier Coded

Property term	Value	Measure term
eOTD CLASS NAME	BOLT:MECHANICAL	
PRODUCT NUMBER	3225020037	
NOMINAL THREAD DIAMETER	1.0	INCHES
WIDTH ACROSS FLATS	1.450	INCHES
WIDTH ACROSS CORNERS	1.653	INCHES
HEAD HEIGHT	0.591	INCHES
COUNT PER PACK	10	
PACK PRICE	0.80	US DOLLAR

eOTD Identifiers Resolved

Machine Bolt; Product Number: 3225020037; Nominal thread diameter: 1.0 inches; Width across flats: 1.450 inches; Width across corners: 1.653 inches; Head height: 0.591 inches; Count per pack: 10; Pack price: $0.80 (M-Bolt;NTD1.0";WAF1.45";CPP10)

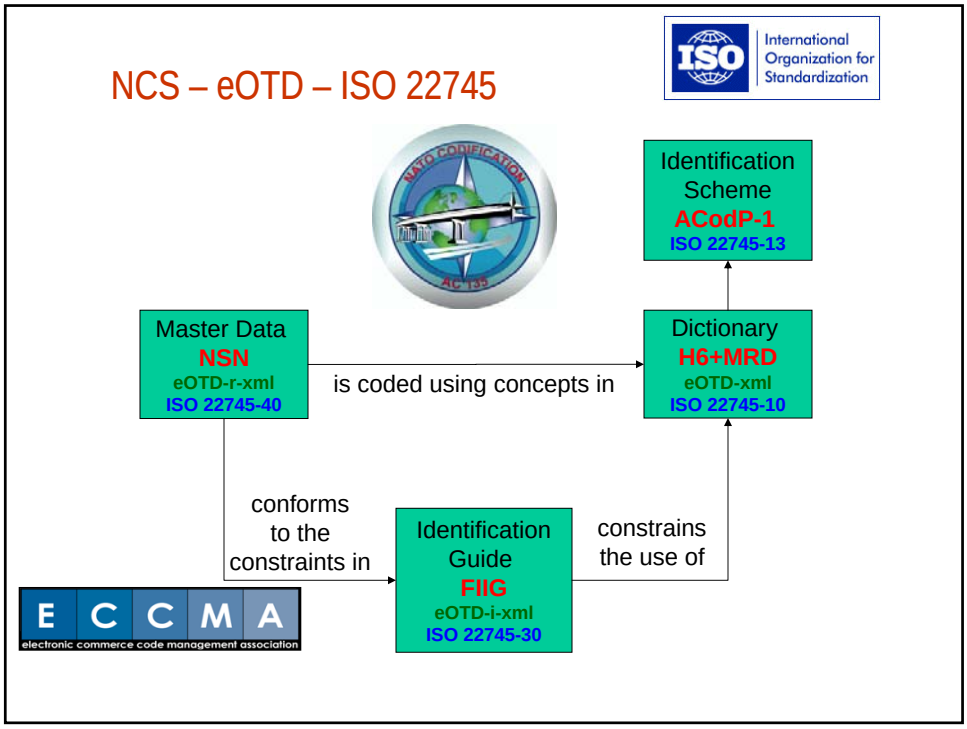
Rendered

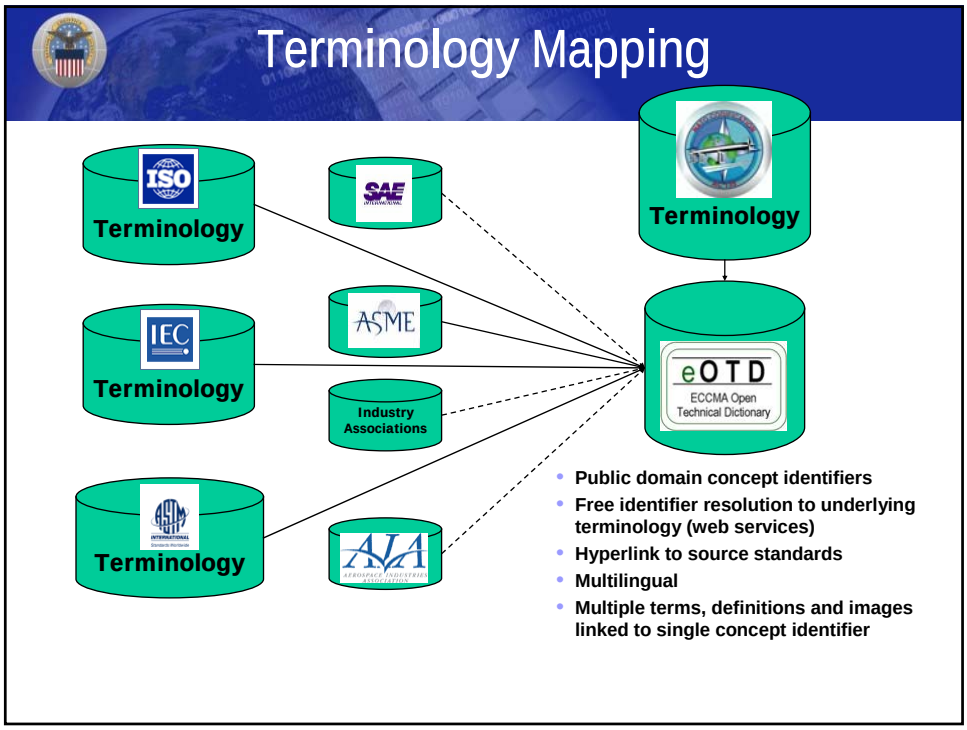
Master Data

data held by an organization that describes the entities that are both independent and fundamental for an enterprise, that it needs to reference in order to perform its transactions

Master data describes individuals, organizations, locations, goods, services, rules and regulations.

- Customers
- Suppliers
- Materials
- Services
- Assets
- Locations
- Employees
- MSDS


NCS – eOTD – ISO 22745
International Organization for Standardization
Identification Scheme
ACodP-1
ISO 22745-13
Master Data
NSN
eOTD-r-xml
ISO 22745-40
is coded using concepts in
Dictionary
H6+MRD
eOTD-xml
ISO 22745-10
conforms to the constraints in
Identification Guide
FIIG
eOTD-i-xml
ISO 22745-30
constrains the use of
E C C M A
electronic commerce code management association


Terminology Mapping
Terminology
Terminology
Terminology
Terminology
Industry Associations
eOTD
ECCMA Open Technical Dictionary
Public domain concept identifiers
Free identifier resolution to underlying terminology (web services)
Hyperlink to source standards
Multilingual
Multiple terms, definitions and images linked to single concept identifier

Transformation Through Automation

Before

- lack of clarity on data requirements
- disparate data format
- disparate data content
- disparate metadata
- potentially subjective human judgment
- operate as an additional process

After

- application processable data requirement statements
- consistently mapped metadata
- standard characteristic data exchange format

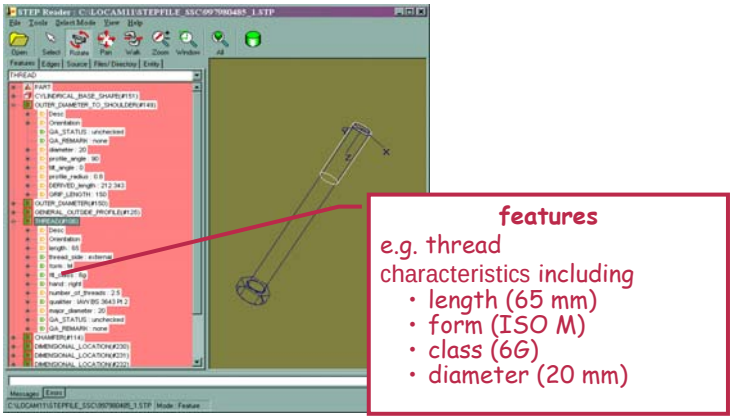
impact: faster, better, cheaper

ISO 22745: eOTD as International Standard

- **Fundamentals of ISO Standard 22745:**
  - Embodies eOTD metadata into international standard
  - Creates a standard data requirements statement (Identification Guide)
  - Creates a standard request for characteristic data that can be processed by manufacture's applications (PDM, ERP)
  - Creates a standard characteristic data exchange format
  - Describes how characteristic data can be tagged in STEP design files (ISO 10303)

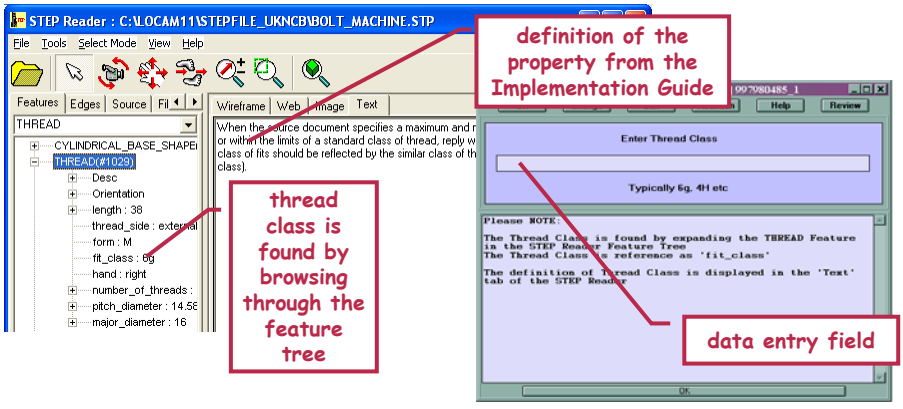
ISO 22745: Automation of Cataloging

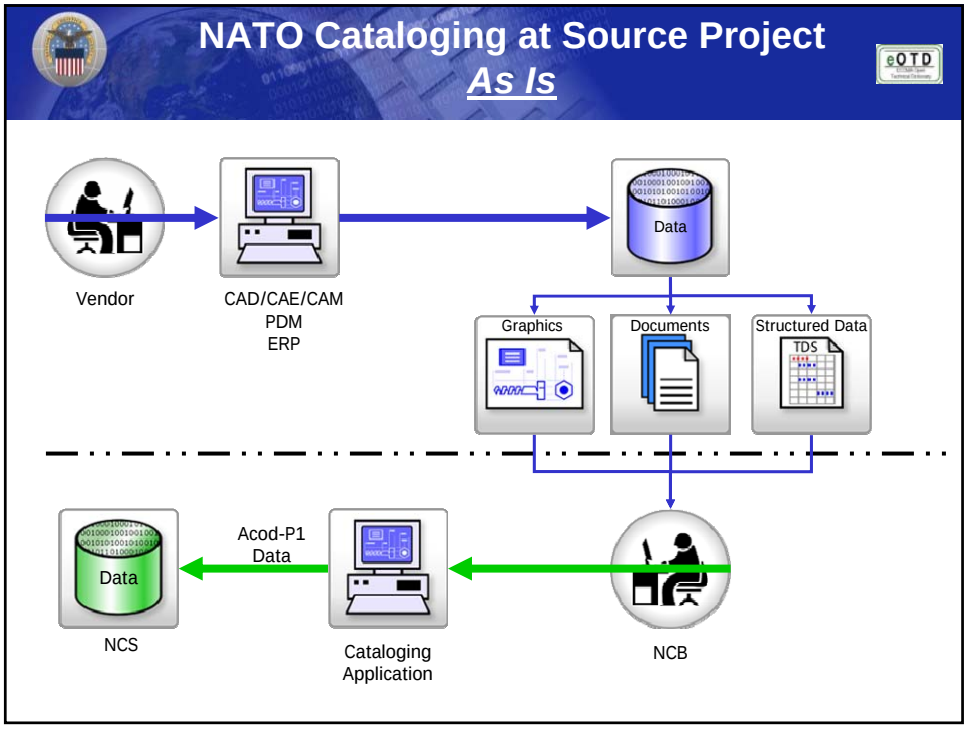
- **Mapping Catalog Data from Source Data**

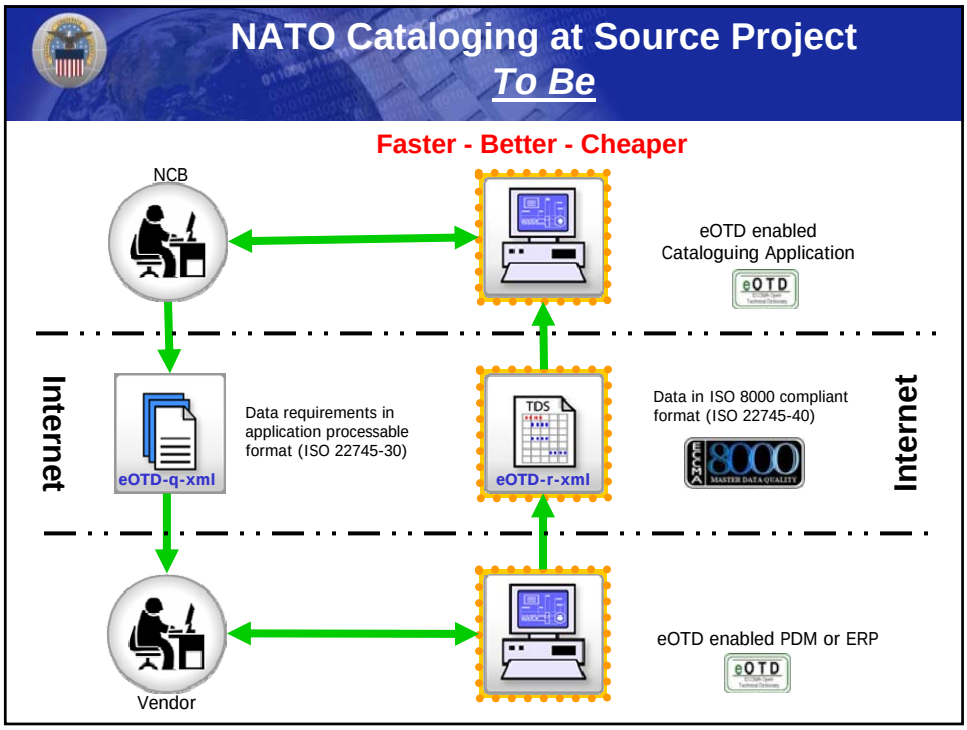


ISO 22745: Automation of Cataloging

- **Create data one time and use throughout life cycle**




NATO Cataloging at Source Project
As Is
Vendor
CAD/CAE/CAM
PDM
ERP
Data
Graphics
Documents
Structured Data
TDS
Data
NCS
Acod-P1
Data
Cataloging
Application
NCB


NATO Cataloging at Source Project
To Be
Faster - Better - Cheaper
NCB
eOTD enabled
Cataloguing Application
Internet
eOTD-q-xml
Data requirements in
application processable
format (ISO 22745-30)
TDS
eOTD-r-xml
Data in ISO 8000 compliant
format (ISO 22745-40)
Internet
Vendor
eOTD enabled PDM or ERP

Original ERP Short Description

ELECTRIC MOTOR

Original Supplier Catalog Description

P/N 1234EF: 400KW 6 POLE 525VOLT FRAME HGF355E: FT MOUNTED RPM 988 SF1,0 CODE G:IP65:INS F:IL/IN 6.6:DUTY SI: NR.88695 11 00:AMB 40DEGREE C:DELTA T 80DEG: COS 0,86:COOLING IC 411:ALT1000M

Standardized ERP Short Description

MOTOR, ELEC: 400 KW, 525 V, 988 RPM

Standardized ERP PO Description

MOTOR, ELECTRIC: POWER RATING 400 KW, ELECTRICAL RATING 525 V, FRAME HGF355E, FOOT MOUNTING, SPEED 988 RPM, INSULATION CLASS F, 6 POLES, SERVICE FACTOR 1.0 CODE G, ENCLOSURE IP65, MNFR P/N: 1234EF MNFR: WEG, FFT: IL/IN 6.6: DUTY SI: NR.88695 11 00:AMB 40 DEGREE C:DELTA T 80DEG: COS 0,86:COOLING IC 411:ALT 1000M

Rendering of ERP Long and Short Descriptions

ISO 8000: A Standard for Master Data Quality

- **Fundamentals of ISO Standard 8000:**
  - **Set standards and a certification process for master data quality**
  - **Encompasses master data quality but can easily be extended into all types of data quality**
  - **Defines different areas of data quality**
    - **Provenance**
    - **Traceability**
    - **Currency**
    - **Completeness**

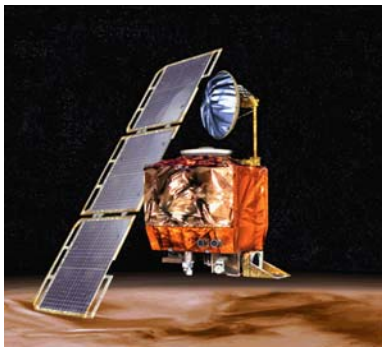
ISO

ECCMA 8000 MASTER DATA QUALITY

Benefits of ISO 8000

- **Providing faster access to better quality characteristic data**
  - **Faster NSN assignment**
  - **More complete records**
  - **Better search resolution**
  - **Fewer duplicates**
  - **Fewer item reduction studies**
- **Benefits**
  - **Higher customer satisfaction**
  - **Savings in design and life cycle costs**
  - **Reduced acquisition lead time**
  - **Increased supportability and safety of systems and equipment**

What is the cost of bad data quality?
In this case $125,000,000
The price of a Mars Climate Orbiter!



Mars Orbit Insertion Burn	M/D/Y HH:MM:SS PDT (Earth Receive Time, 10 min. 49 sec. Delay)	Distance (miles)	Speed (miles/hr)	Force (Pounds)
Begin	9/23/99 02:01:00	121,900,000	12,300	143.878
End	9/23/99 02:17:23		9,840	

Mars Orbit Insertion Burn	YYYYMMDD EDT (Earth Receive Time, 10 min. 49 sec. Delay)	Distance (km)	Speed (km/sec)	Force (Newtons)
Start	19990923 05:01:00	196,200,000	5.5	640
Finish	19990923 05:17:23		4.4	

International Organization for Standardization

- **156 National standard organization members (one per country)**
  (AFNOR, ANSI, BIS, BSI CNIS, DIN, PKN …….)
- **192 Technical Committees**
  - **3 000 Technical bodies**
  - **50 000 domain experts**
- **Central Secretariat in Geneva**
  - **150 staff**
- **ISO TC 184 Industrial automation systems and integration**
  - **ISO TC184 SC4 Industrial data (STEP)**
    - ISO 22745 (open technical dictionaries and their application to Master Data)
    - ISO 8000 (Data Quality)

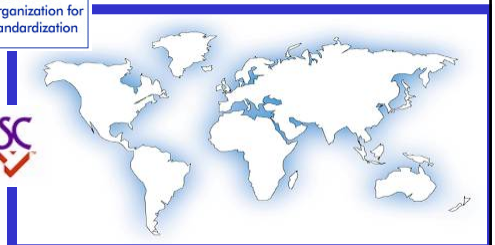
ISO International Organization for Standardization

SC

ECCMA electronic commerce code management association

ISO TC 184/SC 4 voting members

International Organization for Standardization



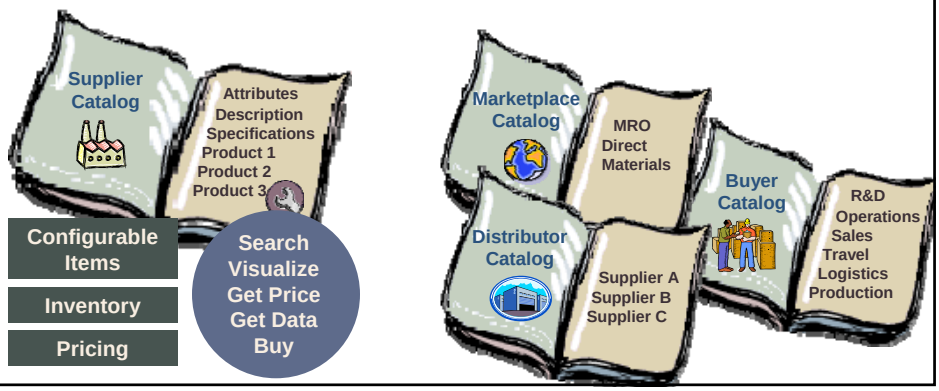
- **Australia, SAI; Standards Australia International, Ltd**
- **Austria, ON; Österreichisches Normungsinstitut**
- **Brazil, ABNT; Associação Brasileira de Normas Técnicas**
- **Bulgaria, BDS; State Agency for Standardization and Metrology**
- **China, SAC; Standardization Administration of China**
- **Czech Republic, CNI; Czech Standards Institute**
- **France, AFNOR; Association française de normalisation**
- Germany, DIN; Deutsches Institut für Normung
- **Italy, UNI; Italian National Standards Body**
- **Japan, JISC; Japanese Industrial Standards Committee**
- **Korea, KATS; Korean Agency for Technology and Standards**
- **Netherlands, NEN; Nederlands Normalisatie-instituut**
- **Norway, SN; Standards Norway**
- **Portugal, IPQ; Instituto Português da Qualidade**
- **Russia, GOST; Federal Agency on Technical Regulating and Metrology**
- **South Africa, SABS; South African Bureau of Standards**
- **Spain, AENOR; Asociación Española de Normalización y Certificación**
- **Sweden, SIS; Swedish Standards Institute**
- **Switzerland, SNV; Swiss Association for Standardization**
- **United Kingdom, BSI; British Standards Institution**
- **United States, ANSI; American National Standards Institute**

Justification for ISO 22745/8000

- **Item reduction studies (identification of duplicates)**
  - ***Save up to 15% of total inventory cost***
- **Better sourcing and contracting**
  - ***Save up to 20%***
- **Substitution and interoperability**
  - ***Part standardization during design and manufacture***
    - ***Increases equipment availability***
    - ***Can be mission critical***

Codification: the Center of eCommerce

- **Online catalogs are a critical success factor for eCommerce initiatives**
- **An electronic representation of goods and services: facilitates global buy/sell activities**



BOEING

Boeing Technology
Phantom Works

Phantom

The eOTD is a foundation for design collaboration and industry standards.

ISO 22745 and the eOTD are the foundational enablers for the breakthrough our industry needs in the next generation of direct, accurate, and effective collaboration across the supply chain at meaningful and granular levels of data exchange never before imagined.

Alton Sanders
Senior Manager,
IDS Engineering Standards Control Function
PW Knowledge and Reuse Management (KARMA)

BOEING

Boeing Technology
Phantom Works

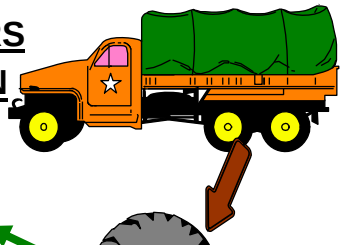
Phantom

"Boeing currently buys 200 different kinds of safety glasses and 80 different shades of white paper. The defense and commercial aircraft divisions each negotiate for their own aluminum and titanium. Why can't we buy two or three kinds of safety glasses? Why can't we have standard part numbers that go across the enterprise?"

James F. Albaugh, CEO Boeing Integrated Defense Systems,
Business Week March 13, 2006

NATO Stock Number (NSN)

MANUFACTURERS IDENTIFICATION SYSTEM



USERS CODIFICATION SYSTEM

NAVY
ARMY
AIR FORCE
OTHER COUNTRIES

DUNLOP
11-00-20SPTGM

GOODYEAR TIRE CO
11-00-20SRLER

GOODYEAR FRANCE
11-00-20UNISRL

CUP SNC
1100R20GSRT4-16PR

2610-14-3224604

Single Stock Number

The Value

ANGLO COAL

52368965412 – Tyre Bridgestone 435/95 R25

ANGLO BASE METALS

56329845 – Tyre BS 435/R25 Standard Purpose E3 2 Star Radial

ANGLO PLATINUM

125435 – Bridge Stone 25inch 435/95

KUMBA RESOURCES

965123465 – Tyre Bridgestone Part Number 12345

One Common Anglo Number

Standardised Long Description:
Tire: Pneumatic, Vehicular: Service Type for Which Designed: Loader Tire Rim Nominal Diameter: 25' Tire Width: 445mm Aspect Ratio: 0.95 Tire Ply Arrangement: Radial Ply Rating: 2* Tire & Rim Association Number: E3 Tread Material: Standard Tire Air Retention Method: Tubeless Tire Load Index and Speed Symbol: NA Tread Pattern: VHB TKPH Rating: 80

Standardised Short Description:
Tire Pneumatic: Loader 25' 445mm 0.95 2*

masterpiece sparesFinder

Provisional Corporate Match

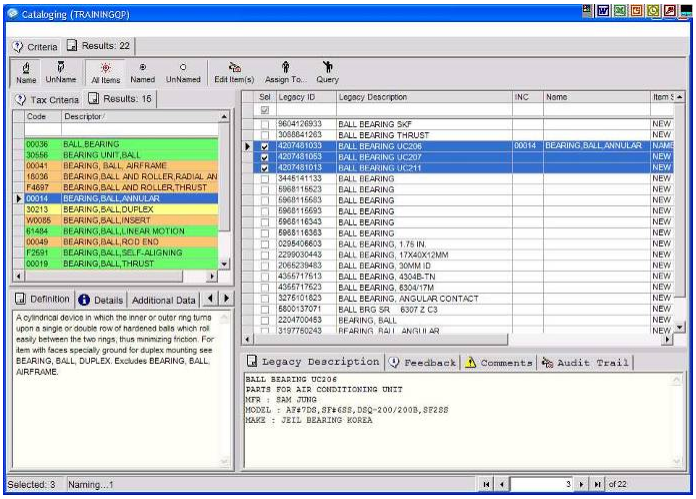
Original Data Manufacturer	Part No.	Description	Price(USD)	Working Part No.	All	Local Catalogue Matches Manufacturer	Master Part No.	Description	Score
WARMAN INTERNATIONAL LTD	B217	SEAL, O-RING	0	B217		WARMAN INTERNATIONAL LTD	B217	1.094IN; 0.094IN; RBR	0
WARMAN INTERNATIONAL LTD	B109	SEAL, O-RING	0	B109		WARMAN INTERNATIONAL LTD	B109	1.38IN; 0.11IN; RBR	0
JAMES WALKER	0BO34107	SEAL, O-RING	0	0BO34107		JAMES WALKER	0BO34107	2-3/8IN; 1/8IN; RBR; BLK	0
LIGHTNIN MIXERS PTY LTD	115763VIT	SEAL, O-RING	0	115763VIT		LIGHTNIN MIXERS PTY LTD			
LIGHTNIN MIXERS PTY LTD	115861PSP	SEAL, O-RING	0	115861PSP		LIGHTNIN MIXERS PTY LTD			
SEW EURODRIVE	32303AV	RING	0	32303AV		SEW EURODRIVE			
STERLING FLUID SYSTEMS	45.8 - 041OB	RING	0	45.8 - 041OB		STERLING FLUID SYSTEMS			
FRANKLIN ELECTRIC	275743133	SEAL, O-RING	0	275743133		FRANKLIN ELECTRIC			
MOYNO CO	3207905210	SEAL, O-RING	0	3207905210		MOYNO CO			
LECO CORPORATION	611-476	SEAL, O-RING	0	611-476		LECO CORPORATION	611-476	1.811IN; 0.374OIN; RBR	0
LECO CORPORATION	611-477	SEAL, O-RING	0	611-477		LECO CORPORATION	611-477	2-1/16IN; 0.2IN; RBR; BLK	0
INGERSOLL DRESSER PUMP COMPANY	20A11CM268	SEAL, O-RING	0	20A11CM268		INGERSOLL DRESSER PUMP COMPANY	20A11CM268	8.50MM; 8.75MM; RBR	0
LIGHTNIN MIXERS PTY LTD	11581PSP	SEAL, O-RING	0	11581PSP		LIGHTNIN MIXERS PTY LTD	11581PSP	11.8IN; 1/4IN; RBR; BLK	0
MARATHON PUMPS	560020360	SEAL, O-RING	0	560020360		MARATHON PUMPS	560020360	1.19IN; 0.094IN; RBR	0
MARATHON PUMPS	560022360	SEAL, O-RING	0	560022360		MARATHON PUMPS	560022360	1.47IN; 0.094IN; RBR; BLK	0

Location: Peru
Stock Code: 000391219

INSIDE DIAMETER	2-3/8	IN
OUTSIDE DIAMETER		IN
CROSS-SECTIONAL HEIGHT	1/8	IN
MATERIAL	RUBBER	
TEMPERATURE RATING		DEG F
HARDNESS RATING		
COLOR	BLACK	
SPECIFICATION/STANDARD DATA		

Activity History / Assign User / Add Note
View Long Description
Reject Match
Rematch
Approve Match
Results: 1 to 15 of 159

Catalog Compose: Cleansing Productivity Tool



Stock Code Catalogue Data Sheet

Stock Code	**000408187**
Corporate Stock Code	PIGO-028721
Unit of Issue	EA
Object	VALVE
Qualifier	BALL
Status	NOT DONE

Short Description

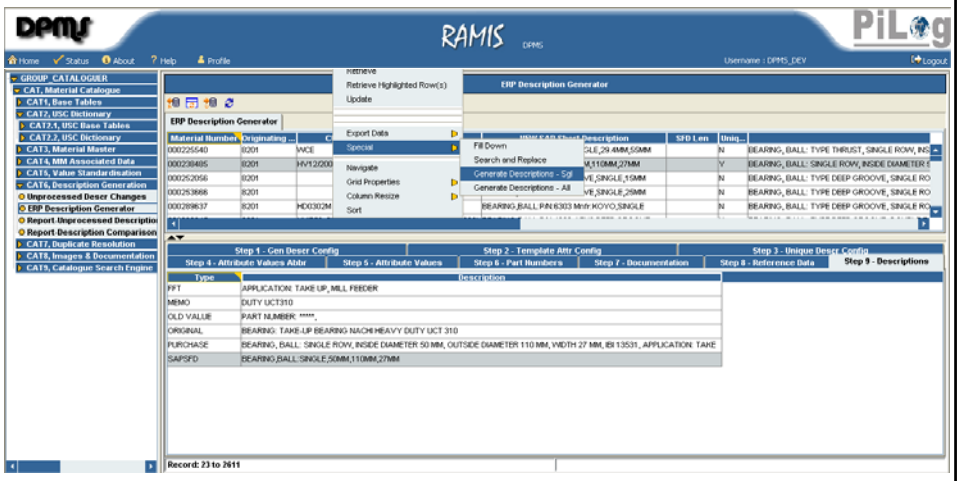
VALVE, BALL: 32MM, PUSH ON,PVC BODY, BALL & SEAT EPDM, EPDM,HANDLEVER OPERATED

Purchase Description

VALVE, BALL: SIZE 32MM, CONNECTION PUSH ON, PVC BODY MATERIAL, TRIM BALL & SEAT EPDM, SOFTGOODS EPDM, HANDLEVER OPERATED

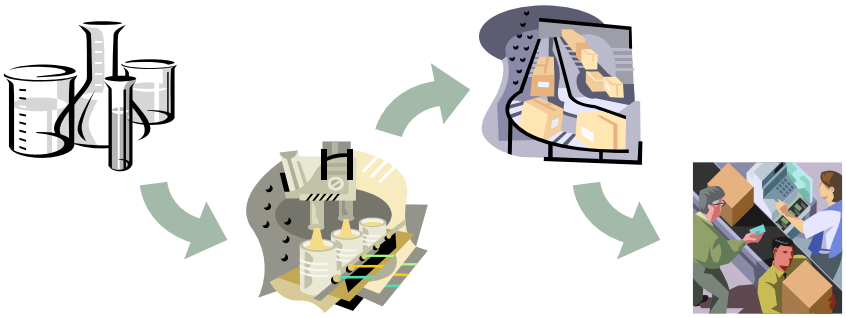
Attribute	Value
BODY MATERIAL	PVC
CONNECTION	PUSH ON
DESIGN RATING	*****
OPERATED	HANDLEVER
SIZE	32MM
SOFTGOODS	EPDM
SPECIFICATION	*****
STYLE	*****
TEMPERATURE RATING	*****
TRIM	BALL & SEAT EPDM

Generate New Descriptions



A Vision Realized

- **The NATO Codification System is the foundation of an international standard for creating standard descriptions**
- **The eOTD is an open standard for encoding Master Data through the life cycle of a product – from design through disposal**



Vision of the Future

- **Logisticians will manage information more than material**
- **NCS data is the foundation for logistics information**
- **Benefits will grow**

Vision for the Future

What is impossible to do right now, but, if you *could* do it, would fundamentally change your business?

1990 Joel Arthur Barker

- **Cataloging at source (vendor supplied data)**
  - **Common metadata**
    - **an end to data mapping**
  - **Requirement specifications**
    - **an end to incomplete data**
  - **Data provenance**
    - **an end to inaccurate information**
- **Lowers the cost of cataloging and increases long term data reliability!**