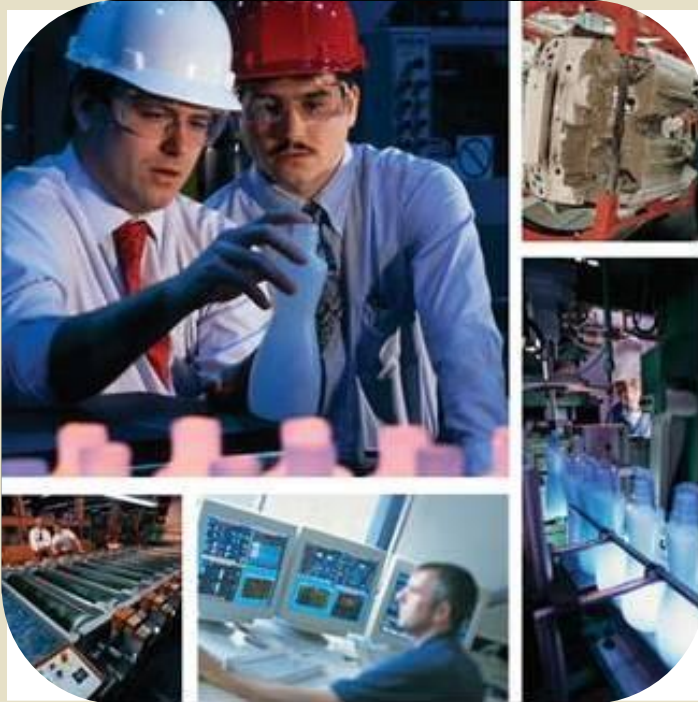


LISTEN.
THINK.
SOLVE.®



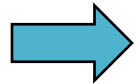
Practical Issues in Electronic Cataloging for a Global Manufacturing Company

D. Carnahan. P.E.
Advanced Technology

(Confidential – For Internal Use Only)



Agenda



Company background & perspective

Drivers for improved data descriptions

Role of standards

Practical examples for electronic catalogs

Summary

Rockwell Automation At A Glance

- Fiscal 2010 Sales:
Approximately \$4.9 billion
- Employees: About 19,000
- Serving customers in
80+ countries
-- emerging markets over
20% of total sales
- World Headquarters:
Milwaukee, Wisconsin, USA
- Trading Symbol: ROK



Leading global provider of
**industrial power, control
and information solutions**

Consumer-Driven Industries Include...

Consumer Packaged Goods



Automotive

Increase flexibility & responsiveness while reducing costs & improving quality.

- Bridgestone
- DaimlerChrysler
- Ford
- GM
- Goodyear
- Hyundai
- JCI
- Lear
- Magna
- Michelin
- Toyota



Food & Beverage

Satisfy consumer demand, while reducing costs, minimizing waste & improving asset performance.

- Anheuser-Busch
- Coca-Cola
- Kellogg
- Kraft/Nabisco
- M&M Mars
- Nestlé
- PepsiCo/Frito-Lay
- SABMiller



Household & Personal Care

Meet regulatory challenges & improve quality, consistency, flexibility & time-to-market.

- 3M
- Beiersdorf
- Colgate-Palmolive
- DuPont
- Henkel
- Kimberly-Clark
- L'Oréal
- Procter & Gamble
- Unilever



Life Sciences

Reduce costs while meeting the demands of ever-changing regulations.

- Abbott Laboratories
- Johnson & Johnson
- Merck
- Pfizer
- Sanofi
- Wyeth-Ayerst

Heavy, Resource-Driven Industries Include...



Water / Wastewater

Achieve low long-term cost & on-demand engineering expertise with scalable solutions.

- A & E Firms
- Consultants
- Design Engineer Firms
- Design Institutes (Asia)
- Global Municipalities
- Privatizers (Europe)
- Pump OEMs
- System Integrators



Mining / Metals / Cement

Execute real-time control & maintain critical process parameters to respond to customer demands.

- Alcoa
- BHP Billiton
- CEMEX
- Holcim
- Lafarge
- Rio Tinto
- US Gypsum
- Vulcan



Oil & Gas

React to changing production conditions while maintaining operations at peak efficiency.

- BP
- Chevron
- ConocoPhillips
- ExxonMobil
- Shell



Semiconductor / Electronics

Increase yields while reducing risk & total cost of ownership by using a single automation control & information infrastructure.

- Agilent
- Applied Materials
- ATS Automation
- Axcelis
- IDC / CH2M
- KLA-Tencor
- Novellus
- Praxair
- Seagate

Who we are...

Today's
ROK

NCAGE	NAME	COUNTRY	CITY
01121	ROCKWELL AUTOMATION INC.	UNITED STATES	MILWAUKEE
4H047	ROCKWELL AUTOMATION INC.	UNITED STATES	CLEVELAND
RF65	ROCKWELL AUTOMATION LTD	UNITED KINGDOM	MILTON KEYNES
EA890	ROCKWELL AUTOMATION NZ LTD	NEW ZEALAND	AUCKLAND
ELV26	ROCKWELL AUTOMATION NZ LTD	NEW ZEALAND	
58DB0	ROCKWELL MECHANICAL LLC	UNITED STATES	MILWAUKEE
94357	DELTA POWER TOOL DIV OF ROCKWELL MFG CO	UNITED STATES	MILWAUKEE
1KKV4	DONALD ROCKWELL DBA R.R UNLIMITED SERVICES	UNITED STATES	
4B224	NORTH AMERICAN ROCKWELL CO	UNITED STATES	COLUMBUS
5NPA3	ROCKWELL BUILDING SYSTEMS, INC.	UNITED STATES	ROCKWELL
461L8	ROCKWELL CITY OF INC	UNITED STATES	ROCKWELL CITY
6U346	ROCKWELL COLLINS AEROSPACE & ELECTRONICS INC. DBA RC HEADS UP GUIDANCE DIV DIV FLIGHT DYNAMICS	UNITED STATES	CEDAR RAPIDS
0N7J7	ROCKWELL CONSTRUCTION CORP	UNITED STATES	POMPANO BEACH
5NN00	ROCKWELL CONSULTING INC	UNITED STATES	COLORADO SPRINGS
1FNC2	ROCKWELL INTL CREDIT CORP	UNITED STATES	CEDAR RAPIDS
0XAN4	ROCKWELL INTL TACTICAL SYSTEMS DIV	UNITED STATES	HUNTSVILLE
0RUT3	ROCKWELL LASER INDUSTRIES INC.	UNITED STATES	CINCINNATI
9M329	ROCKWELL LUMBER CO DBA ROCKWELL BROS & CO	UNITED STATES	BIG SPRING
5LUA8	ROCKWELL LUMBER CO., INC.	UNITED STATES	GREENCASTLE
5QZZ9	ROCKWELL MANOR APARTMENTS	UNITED STATES	FAIRFIELD
0HKB1	ROCKWELL MEDICAL SUPPLIES INC	UNITED STATES	CARSON
8Z355	ROCKWELL TELECOMMUNICATIONS INC SWITCHING SYSTEMS DIV SUB ROCKWELL INTERNATIONAL CORP	UNITED STATES	DOWNERS GROVE
4SMW9	ROCKWELL TRADING INC	UNITED STATES	AUSTIN
37WE5	ROCKWELL WILLIAM W	UNITED STATES	TOWNSEND
5DKA3	ROCKWELL, TOWN OF!DIV ROCKWELL POLICE DEPT!DBA POLICE DEPARTMENT	UNITED STATES	ROCKWELL

Historic
ROK

Focusing on Plant-Wide Automation

Smart, Safe, Sustainable Manufacturing



Product examples...

Process Automation Controllers



Human Machine Interface & Machine Interface

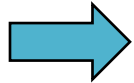


Communications and Power Control



Agenda

Company background & perspective



Drivers for improved data descriptions

Role of standards

Practical examples for electronic catalogs

Summary

21st Century Smart Manufacturing

- Workshop Report -

Implementing 21st Century Smart Manufacturing Workshop Summary Report - June 2011

- Effectively collecting, storing, reconciling, and using **data** across the manufacturing enterprise is a key aspect of smart manufacturing systems and successful deployment of operational models.
- Collection and use of **engineering data** in manufacturing facilities today is relatively inefficient due **to the lack of standardized, easily usable data systems.**
- Significant improvements are needed in today's data management

Many who deal with large-scale data believe we are in the fourth stage of the information age
This includes better data protocols and interfaces, and communication standards.

...Hardware ->Software ->Communications ->Data....

Source: D. Grier, IEEE Computer Society, October 2011

Key Driver - A Manufacturer's perspective...

- **CUSTOMER SERVICE**

- Customers can be distributors, or OEMs or End Users or Maintenance or....
- but the issue is always the same

- **1000+ different product LINES with hundreds of thousands of items**

- many of which are Configured To Order....Customers need to get the right part, quickly and efficiently...It is a competitive advantage.

- **ISO standards enable multiple enterprises to interact WITHOUT HUMAN INTERVENTION....**

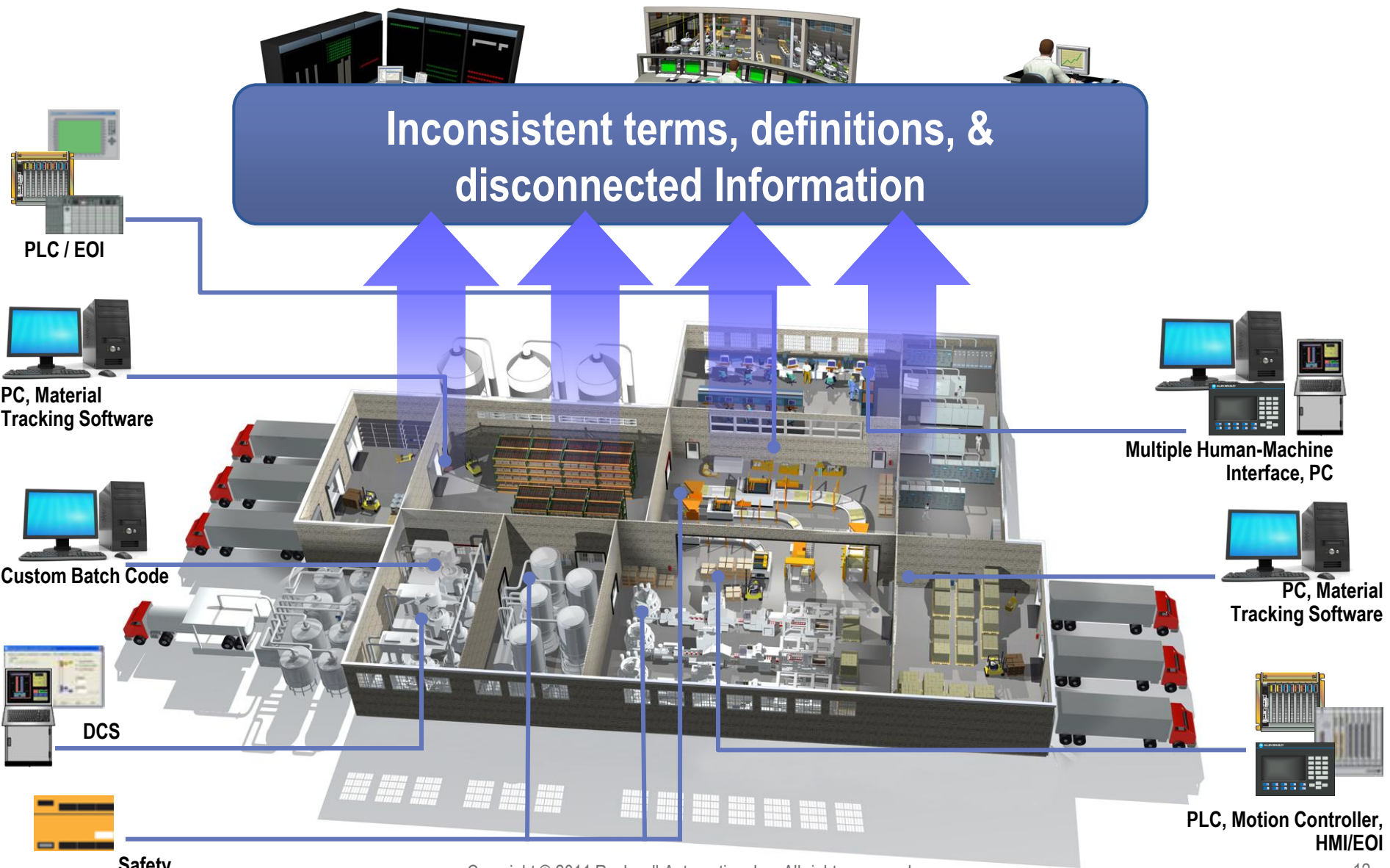
- that is the big deal here

- Transition from the model where we need a TSR to intervene in the transactions.

- Procuring system knows what it wants...and the delivering system should be able to make that request without human assistance.
- A BIG transition for eCommerce...and a HUGE efficiency gain.**

Productivity Obstacles - Data ambiguity

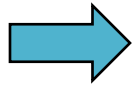
Inconsistent terms, definitions, & disconnected Information



Agenda

Company background & perspective

Drivers for improved data descriptions

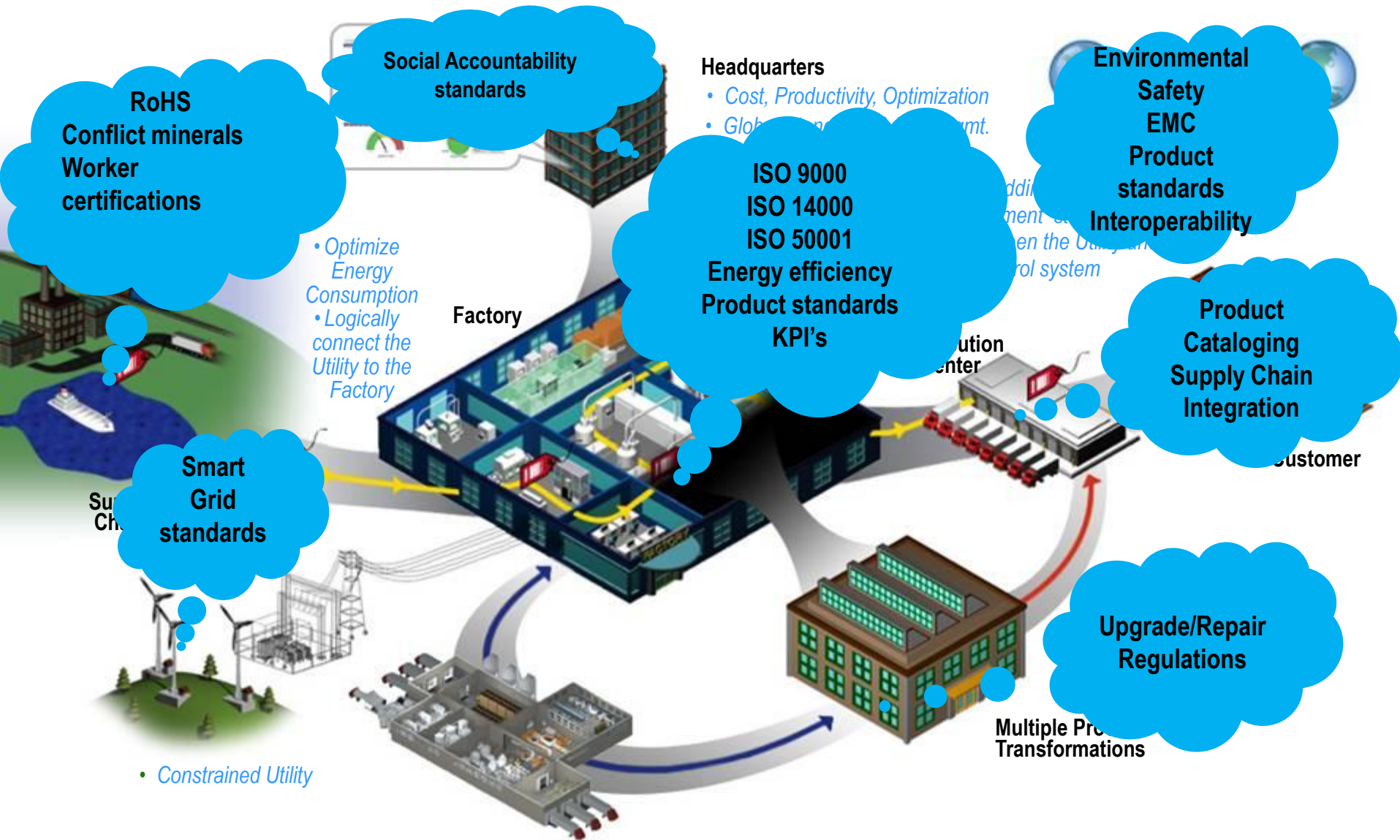


Role of standards

Practical examples for electronic catalogs

Summary

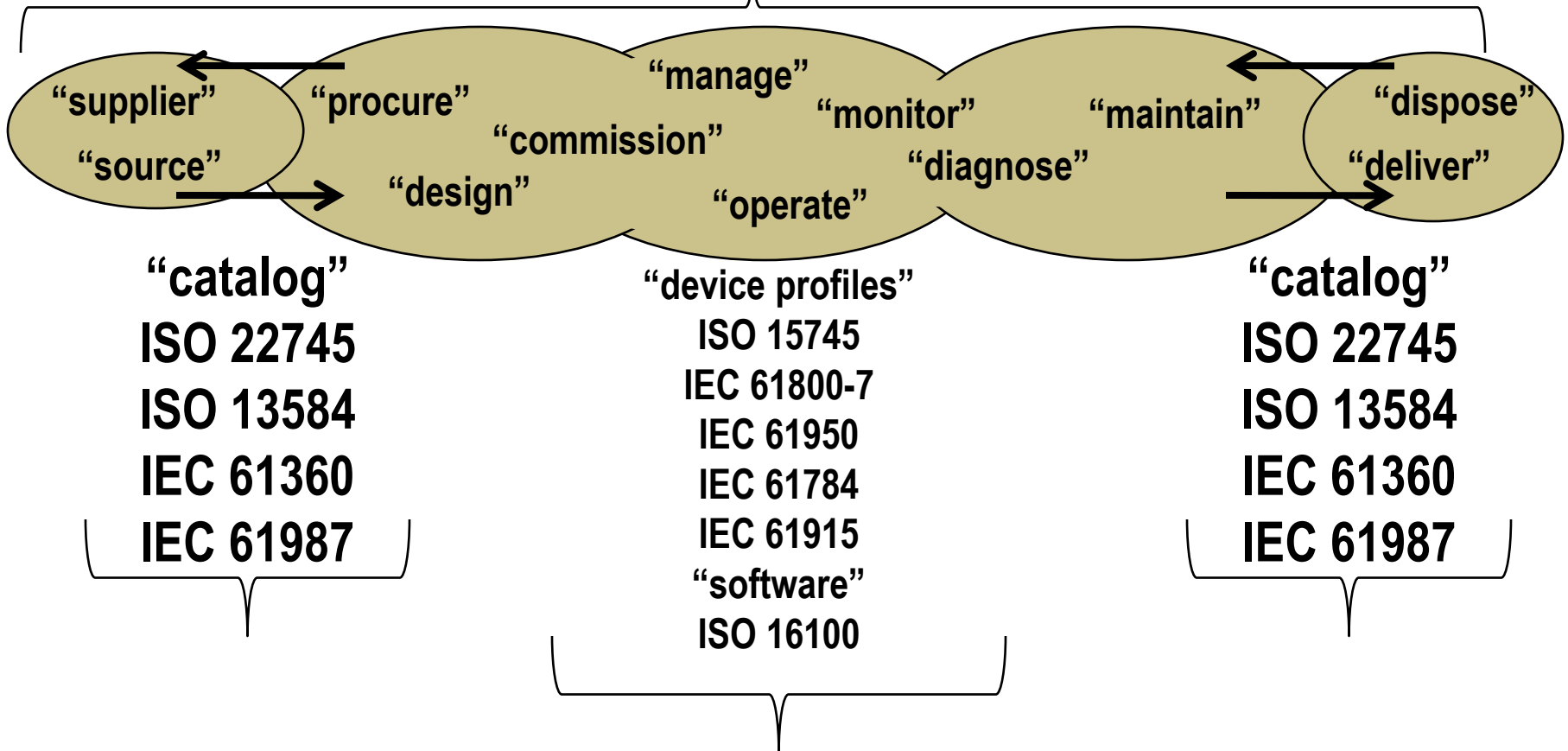
Standards in all aspects of the supply chain...



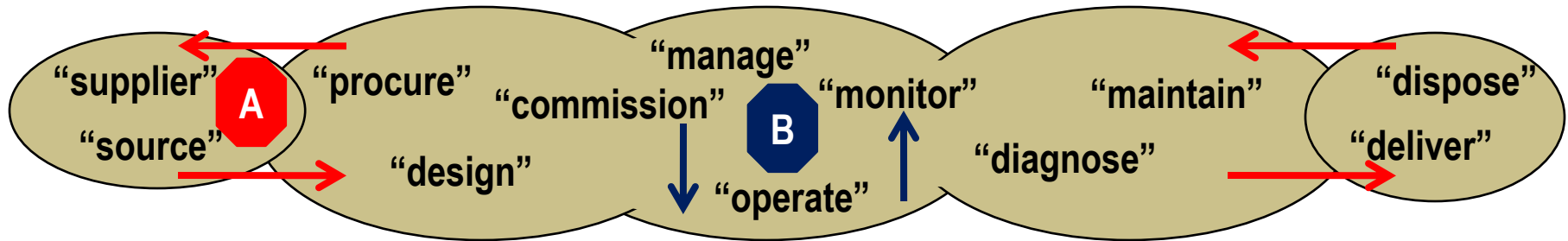
Supply Chain - Product Cataloging & Device Properties in the Digital Enterprise Context



ISO 8000 “data quality”



What type of product information is needed?



Customer -> Supplier query...

- How big is it?
- What voltage?
- How to connect to it?
- What is it compatible with?
- What standards does it meet?
- How much power does it use?
- Does it have a touch screen?
- Is it color or monochrome?
- What communications does it support?
- How much does it cost?
- When will it arrive?
- Are there any hazardous materials?
- .
- .



Integrated applications/ system information...

- What devices are connected?
- Are they ready for commissioning?
- Have they been configured?
- Is the system running?
- How much power is it consuming?
- What is the device status?
- Is there an application loaded?
- .
- .
- .

Product Data Activities in the International Standardization

IEC/ISO	Guide IEC/ISO JWG1 77-1
IEC SC3D	Data Model IEC 613601/2 and ISO 13584-42 (identical)
IEC CO	IEC 61360 Data Base
ISO TC37	Standardization of Product Classification ISO 22274
IEC SC3D	Components IEC 61360-4/5
IEC SC65E	Sensors IEC 61987-11/xx
IEC SC65B	Actuators Planning
IEC 22G	Drives in Planning
ISO 4000	Standard Parts e.g. ISO 4000 (Screws)
ISO TC 172	Optic and Optical Systems ISO 13399
IEC SC65E	Engineering Process using Product Data IEC 61987-10
IEC TC184	ISO 8000 Data Quality, ISO 22745 OTD & information exchange

[Source: IEC TC 3]

IEC 61360 Data Dictionary

Class tree +++ --- ?

- [-] Components
 - [-] Electric/electronic components
 - [-] Amplifiers
 - [-] Antennas
 - [-] Batteries
 - [-] Primary batteries
 - [-] Secondary batteries
 - [-] Capacitors
 - [-] Conductors
 - [-] Delay lines
 - [-] Diode devices
 - [-] Filters
 - [-] Integrated circuits
 - [-] Inductors
 - [-] Lamps
 - [-] Liquid crystal displays
 - [-] Optoelectronic devices
 - [-] Oscillators
 - [-] Piezoelectric devices
 - [-] Resistors
 - [-] Sensors
 - [-] Transformers
 - [-] Transistors
 - [-] Trigger devices
 - [-] Tubes
 - [-] Tuners
 - [-] Microwave components
 - [-] Printed wiring circuits
 - [-] Fibre optics
 - [-] Spark gaps
 - [-] Resonators
 - [-] Electromechanical components
 - [-] Magnetic parts
- [-] Materials
- [-] Geometry
- [-] Features

Full properties list for AAA018 (Primary batteries)

From AAA001:

AAE001	main class of component
AAE006	mounting features
AAE012	international standard
AAE017	reference temperature
AAE019	body length
AAE020	body height
AAE021	body breadth
AAE022	outside diameter
AAE111	packing type
AAE112	taping
AAE687	quality approval authority
AAE752	mass
AAE753	inside diameter
AAE834	component description
AAE965	component status
AAF003	material
AAF043	national standard
AAF265	packing arrangement
AAF267	inner tape spacing
AAF268	orientation
AAF269	marking method
AAF276	stress temperature min
AAF277	stress temperature max
AAF278	stress ambient temperature
AAF279	stress relative humidity
AAF318	flange breadth
AAF356	reference view
AAF357	terminal identifier
AAF358	swapability indicator
AAF359	permutability indicator
AAF362	centre of gravity (x-axis)
AAF363	centre of gravity (y-axis)
AAF364	probability distribution
AAF365	normal average value
AAF366	normal standard deviation
AAF367	Poisson variance value

IEC 61360 Component data dictionary

The screenshot displays the IEC 61360 Component Data Dictionary (CDD) web interface. The top navigation bar includes the IEC logo, the text "International Electrotechnical Commission", and buttons for "Home", "Classes", and "Search". Below this, the title "IEC 61360 - Component Data Dictionary (CDD - V2.0010.0004)" is shown. A language selection bar at the top right of the main content area offers "English", "French", "German", and "Japanese", with "English" selected. On the left, a tree view shows the hierarchy of components, with "AAA018 - Primary batteries" selected. The main content area displays the details for this class in a table format.

CLASS	
Code:	AAA018
Version:	001
Revision:	02
Preferred name:	Primary batteries
Synonymous name:	primary battery
Coded name:	PRI
Definition:	A set of primary batteries of which each battery can be described with the same group of data element types.
Note:	PRIMARY BATTERIES are electrochemical systems (batteries) designed for delivery of electric energy in one single uninterrupted (continuous) or interrupted (intermittent) discharge. IEC 60086-1 (1.2.1) (1993)
Remark:	
Definition source:	
Drawing:	
Class type:	COMPONENT_CLASS
Applicable documents:	
Requistry of properties:	
Superclass:	AAA017 - Batteries
Higher level classes:	AAA002 - Electric/electronic components

Property Definition according to IEC 61360 1/2 and ISO 13584-42

m/o/c	Attribute	Example
m	Code	AAE254
m	Version number	005
m	Revision number	02
m	Value format	NR3 S..3.3ES2
m	Data element type class	E01
m	Preferred name	LOW-state output current
o	Synonymus name	output sink
m	Definition	The minimum guaranteed LOW-state dc output current (in A) of a digital function of an IC
o	Source document of data element type definition	IEC748-2 (III.5.3.1)(1985)
o	Unit of measure	A
o	Formula
o	Figure

[Source: IEC TC 3]

Example: Product Data of a Transmitter Device

Mechanical and Constructive Properties

- Length of the Sensor Cell
- Diameter of the Sensor Cell
- Sensor Cell Material
- Weight of the Sensor
- Dimension of the Housing (length, wide, high)
- Material of the Housing
- Vibration Protection
- Local Display
- Local Operator Panel etc.

Function Properties

- Threshold Level
- Event Signalling
- Linearisation Curve
- Compensating Function
- Time Stamp Function
- Self Calibration
- Fail Safe Mode
- etc.



Resulting Properties

- Units
- Range
- Measuring Limits
- Span
- Scale
- Cycle Time
- Filter Time
- Communication Interface etc.

Domain „Automation“ in IEC CDD

1	Classification scheme for automation equipment			
2	Classification	Definition IEC	Identifier	LOF
3	automation equipment	equipment that	IEC-ABA641	
4	measuring instrument	artifact that dete	IEC-ABA642	
5	gauge	measuring inst	IEC-ABA643	
6	flow gauge	gauge that mea	IEC-ABA644	
7	positive displacement flow gauge	flow gauge that	IEC-ABA645	x
8	oval gear flow gauge	positive displac	IEC-ABA646	
9	turbine flow gauge	flow gauge that	IEC-ABA647	
10	variable area flow gauge	flow gauge that	IEC-ABA648	
11	level gauge	gauge that mea	IEC-ABA649	
14	pressure gauge	gauge that mea	IEC-ABA652	
34	temperature gauge	gauge that mea	IEC-ABA672	x
38	velocity gauge	gauge that mea	IEC-ABA676	
40	volume gauge	gauge that mea	IEC-ABA678	
43	weight gauge	gauge that mea	IEC-ABA681	
46	measuring assembly	measuring inst	IEC-ABA684	
51	sight indicator	measuring inst	IEC-ABA689	
59	switch	measuring inst	IEC-ABA697	
113	transmitter	measuring inst	IEC-ABA751	
207	measuring instrument component	component tha	IEC-ABA845	
252	actuator			
253	low voltage devices			
254	motor starter combination			x
255	motor protection circuit-breaker			x
256	power contactor			
257	for a.c. switching			x
258	for d.c. switching			x
259	for capacitor switching			x
260	combination of contactors			x
261	thermal overload relay			x
262	electronic overload relay			x
263	relay for thermistor protection			x
264	contactor relay			x
265	semiconductor motor controller or softstarter			x
266	motor management device			x
267				

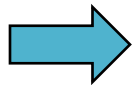
[Source: IEC TC 3]

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Role of standards



Practical examples for electronic catalogs

Summary

Example: PanelView Standard Terminal



<http://www.ab.com/en/epub/catalogs/12762/2181376/1239781/1670480/1681260/index.html>

Example: PanelView Standard Terminal Configure To Order Parts

2711 PanelView Terminal Product Configuration Assistant

Enter the order code for the desired 2711 PanelView Terminal...

OR, make the selections for the product that you need using the interactive selection chart.



Representative Photo Only

PANELVIEW DATA

Display	3" Monochrome Transflective <i>128x64 pixel resolution. Available in Keypad or Keypad without numeric entry. Limited communications options. (DC Only)</i>
Input Method	Keypad
Communication Options	DeviceNet Communication & RS-232 Printer Port
Other Options	Standard Terminal with DC Power

ACCESSORY ITEMS

- Accessories**
- (1) ✓ Memory Cards

Communication Options

- DH-485 Communication Ports
- DeviceNet Communication & RS-232 Printer Port
- RS-232 (DF1) Communication Port
- RS-232 (DH-485) Communication Port

MESSAGES

Example: PanelView Standard Terminal

Description	Cat. No. Keypad ★
DH-485 Communication Ports ❄	2711-K3A2L1
RS-232 (DH-485) Communication Port ❄	2711-K3A5L1
RS-232 (DH-485) Communication Port, Conformal Coated ❄	2711-K3A5L1K
DeviceNet Communication & RS-232 Port	2711-K3A10L1
RS-232 (DF1) Communication Port ‡	2711-K3A17L1

NATO Stock Number

NSN	Item Name (Seg A)	NCage	Reference Number
7025015101279	DISPLAY UNIT	4H047	2711-K10C15
7025015167309	TOUCHSCREEN,DATAEN	01121	2711-T10C16L1
7025015182123	TERMINAL,DATAPROCE	01121	2711-T5A15L1
7025015320679	MEMORY CARD,PERSONA	4H047	2711-NM13
7025015476602	TOUCHSCREEN,DATAEN	01121	2711P-T7C4D1
7025015497089	TOUCHSCREEN,DATAEN	4H047	2711-T10C20L1
7025015500658	TERMINAL,DATAPROCE	01121	2711-T6C15L1
7025015509610	MEMORY UNIT,DATA ST	4H047	2711PRC4
7025015617603	DISPLAY UNIT	01121	2711-B5A20L1
7025015640995	MEMORY CARD,PERSONA	4H047	2711NM232
7025015738031	DISPLAY UNIT	01121	2711P-T10C4A7
7030015667923	SOFTWARE KIT	01121	2711-ND3/E
7030015717686	SOFTWARE KIT	4H047	2711P-RW3
7050015246202	COMPUTER SUBASSEMBL	01121	2711P-RN6
7050015455687	COMPUTER SUBASSEMBL	4H047	2711P-K15C4D2
7050015460129	PANEL,CONTROL,ELECT	01121	2711P-K4M20A

Example: PanelView Standard Terminal Description

**Catalog
Description**

Description Type	Description	Language
Marketing	PanelView™ standard terminal	EN
Technical	PanelView™ standard terminal, 10.4 in., keypad, 120V/240V AC	EN

**Configured
To
Order**

Example: PanelView Standard Terminal Data Requirements

The screenshot shows a software window titled "DR Editor Change" with a close button in the top right corner. The window's title bar also displays "Title: data processing terminal (CTO; Z2711; Panel View Standard Terminal)". Below the title bar is a menu bar with "File", "View", and "Options".

The main area is divided into two panes. The left pane, titled "Data Requirement Specification:", contains a tree view with the following items:

- Class: data processing terminal
 - Property: interface
 - Property: bulletin number
 - Property: display size
 - Property: input voltage

The right pane, titled "Attributes of Data Requirement Specification:", features a table with columns "Attribute Name" and "Attribute Value". The table contains three rows of data:

Attribute Name	Attribute Value
ID	0161-203#IG-469E63BFA58C486D9820D...
Manager Reference String	MATERIAL:440
Title	data processing terminal (KMAT: Z2711 P...

Below the table are "Add" and "Delete" buttons. At the bottom of the right pane is a "Selection Hierarchy" section with a sub-section titled "Data Requirement Specification:".

Example: PanelView Standard Terminal Data Requirements

The screenshot displays the 'DR Editor Change' window for a 'data processing terminal (CTO; Z2711; Panel View Standard Terminal)'. The interface is divided into two main panes.

Left Pane: Data Requirement Specification

- Class: data processing terminal**
 - Property: interface**
 - Controlled Value Type**
 - Value: keypad and touch screen
 - Value: keypad
 - Value: touch screen
 - Property: bulletin number**
 - Property: display size**
 - Controlled Value Type**
 - Value: 1000
 - Value: 1200
 - Value: 1500
 - Value: 2 in.
 - Value: 3 in.
 - Value: 400
 - Value: 5 in.
 - Value: 700

Right Pane: Attributes of Data Requirement Specification

Attribute Name	Attribute Value
ID	0161-203#IG-469E63BFA58C486D9820D...
Manager Reference String	MATERIAL:440
Title	data processing terminal (KMAT: Z2711 P...

Below the table is a 'Selection Hierarchy' section with a dropdown menu currently set to 'Data Requirement Specification:'.

Example: PanelView Standard Terminal Data Requirements

- Some property – value pairs are constrained by Class (enumerated...)

DR Editor Change

Title: data processing terminal (CTO; Z2711; Panel View Standard Terminal)

File | View | Options | Attributes of Data Requirement Specification: | Add | Delete

Attribute Name	Attribute Value
ID	0161-203#IG-469E63BFA58C486D9820D...
Manager Reference String	MATERIAL:440
Title	data processing terminal (KMAT: Z2711 P...

Selection Hierarchy

Data Requirement Specification:

Example: PanelView Standard Terminal Master Data: XML File

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<catalogue xmlns="urn:iso:std:iso:ts:29002:-10:ed-1:tech:xml-schema:catalogue"
xmlns:bas="urn:iso:std:iso:ts:29002:-4:ed-1:tech:xml-schema:basic" xmlns:cat="urn:iso:std:iso:ts:29002:-10:ed-
1:tech:xml-schema:catalogue" xmlns:id="urn:iso:std:iso:ts:29002:-5:ed-1:tech:xml-schema:identifier"
xmlns:val="urn:iso:std:iso:ts:29002:-10:ed-1:tech:xml-schema:value">
  <cat:item class_ref="0161-1#01-1072335#1">
    <cat:property_value property_ref="0161-1#02-090780#1">
      <val:controlled_value value_ref="0161-1#07-284151#1"/>
    </cat:property_value>
    <cat:property_value property_ref="0161-1#02-090972#1">
      <val:controlled_value value_ref="0161-1#07-283937#1"/>
    </cat:property_value>
    <cat:property_value property_ref="0161-1#02-090727#1">
      <val:controlled_value value_ref="0161-1#07-292311#1"/>
    </cat:property_value>
    <cat:property_value property_ref="0161-1#02-090775#1">
      <val:controlled_value value_ref="0161-1#07-291458#1"/>
    </cat:property_value>
  </cat:item>
</catalogue>
```

**Compliant with international standards for master data quality (ISO 8000-110
and ISO 22745-40)**

Example: PanelView Standard Terminal Additional Data

Keypad		
Keypad Description	Stainless steel domed membrane	
Function Keys	4 (F1...F4)	8 (F1...F8)
Actuation Rating, Keys	2 000 000 presses	
Electrical		
Communication ports	RS-232 (DH-485), RS-232 (DF1)	DeviceNet, DH-485, RS-232 (DH-485), RS-232 (DF1)
RS-232 Printer Port	—	1200, 2400, 9600, 19 200 K★
Input Voltage, AC	—	—
Power Consumption, AC	—	—
Input Voltage, DC	11...30V DC	18...32V DC
Power Consumption, DC	2.5 W max (0.105 A @ 24V DC)	10 W max (0.42 A @ 24V DC)

Language rendering...

Return

Catalog Number: 2711P-RDT7CK
 Material Number: 2711P-RDT7CK.A
 Product Type: display module
 Product Family: PanelView™ Plus
 Old Marketing Description: PanelView Plus Display Module
 Old Technical Description: Display Module, PanelView Plus 1000 Keypad/Touch

Generated Descriptions

Locale	RA Language Code	Language	New Marketing Description	New Technical Description
fr_FR	FR	French	Module d'Affichage Panelview™ Plus	Module d'Affichage,Clavier - Écran Tactile,Panelview™ Plus 1000
es_MX	ES	Spanish	Módulo Indicador Panelview™ Plus	Módulo indicador,teclado- pantalla tactil,Panelview™ Plus 1000
en_US	EN	English	Panelview Plus Display Module	Display Module,Keypad - Touch Screen,Panelview Plus 1000
de_DE	DE	German	Panelview™ Plus Anzeigemodul	Anzeigemodul,Keypad - Touchscreen,Panelview™ Plus 1000
nl_NL	NL	Dutch	Panelview™ Plus beeldschermmodule	beeldschermmodule,toetsenblok - touch screen,Panelview™ Plus 1000
da_DK	DA	Danish	Panelview™ Plus display module	display module,keypad - touch screen,Panelview™ Plus 1000
sv_SE	SV	Swedish	Panelview™ Plus displaymodul	displaymodul,knappsats - pekskärm,Panelview™ Plus 1000
tr_TR	TR	Turkish	Panelview™ Plus ekran modülü	ekran modülü,tuş takımı - dokunmatik ekran,Panelview™ Plus 1000
ru_RU	RU	Russian	Panelview™ Plus дисплейный модуль	дисплейный модуль,клавиатура - сенсорный экран,Panelview™ Plus 1000
ja_JP	JA	Japanese	Panelview™ Plus ディスプレイモジュール	ディスプレイモジュール,キーボード - タッチスクリーン,Panelview™ Plus 1000

Rockwell Automation ISO 8000 Product Catalog

CATALOG NUMBER : 1760-IB12XOW4IOF



Class ID: 0161-1#01-1071961#1

Property ID

- 0161-1#02-090874#1
- 0161-1#02-090875#1
- 0161-1#02-091154#1
- 0161-1#02-090851#1
- 0161-1#02-090937#1
- 0161-1#02-091253#1

Concept ID

- 0161-1#07-289348#1
- 0161-1#07-288866#1
- 0161-1#07-285906#1
- 0161-1#07-286345#1
- 0161-1#07-287453#1
- 0161-1#07-286871#1

Class Name: Module

Property term

- Product Family
- Product Type
- Input
- Output
- Type
- Special Features

Value

- PicoGFX™
- module
- 12
- 4 relay
- DC input/output
- analog input/output



Marketing Description

PicoGFX™ DC Input/Output Module

Technical Description

Module,12 Inputs,4 Relay Outputs,DC Input/Output,Analog Input/Output



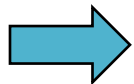
Agenda

Company background & perspective

Drivers for improved data descriptions

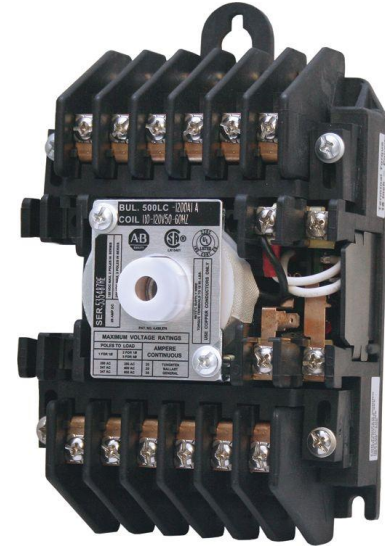
Role of standards

Practical examples for electronic catalogs



Summary

Better and better descriptions

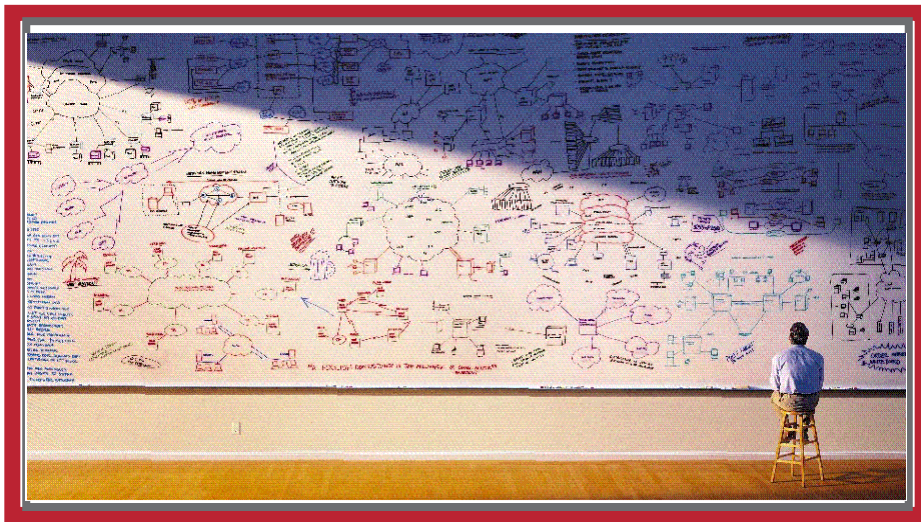


*Easier to find
Easier to integrate
Easier to order*

Summary

- **CUSTOMER SERVICE** will improve with electronic cataloging standards
- **DATA QUALITY** standards are key to developing good data descriptions
- **DIGITAL ENTERPRISE & FACTORY** need electronic product information as basic building blocks
- **CUSTOMERS** will need to access this information for many different activities throughout the digital enterprise supply chain
- **STANDARDS** will reduce the ambiguity of the information and improve the quality of the information
- **PARTICIPATION** and support for the development & use of data quality and cataloging standards enables organizations to prepare for new requirements

Questions?



**Rockwell Automation
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