

Construct I.T.
For Business
enabling process change



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Practical Application and Integration of Barcode and RFID Technology

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Key2ID CITE ISO BASDA

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Topics To Be Covered

- ST: Standards**
- TC: Technology**
- HD: Hardware**
- DA: Data Access**
- AP: Applications**

NB: The Content Illustrates Variety And Is By No Means Exhaustive


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ST: Standards

- Geographic**
 - Corporate, Regional, International
- Industry**
 - Defacto, International, Consortium
- Systems**
 - Closed, Open
- Formats**
 - Technical, Application



International Organization for Standardization

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ST: Trading Standards

- Formats**
 - EDI, Flat File, XML
- Organisations**
 - CITE, BASDA, ebXML




e.centre

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St: IAI - International Alliance for Interoperability

- Industry Foundation Classes**
- Properties Related To Objects**
- Coordinated Method Of Accumulating and Processing Data**
- Amalgamated CITE**






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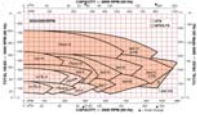
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TC: Connecting The Real World To The Virtual

- Unique ID's**
- Key To Data**
 - Databases
 - Photographs
 - Applications
 - Same ID, Different Contexts




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TC: Barcode

- Well Established
- Many Reader Options
- Low To No Cost To Produce
- Absolute Document Identification
- Fast Production
- Item Specific Identification



Key ID GATE

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TC: EAN 128

European Article Number Code 128

Application Identifiers (401) 50 30766 00005

- 401 Consignment Note Number
- 50 30766 Company Identification
- 00005 Consignment No Number



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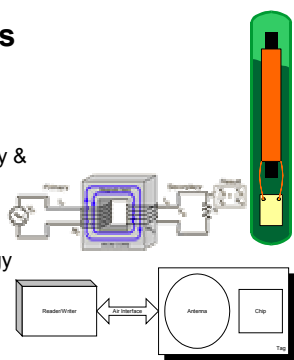
TC: Passive Tags

IC Antenna Reader/Writer

- Transmits Energy & Instructions

Tag

- Absorbs Energy
- Modulates Energy
- Antenna & Chip



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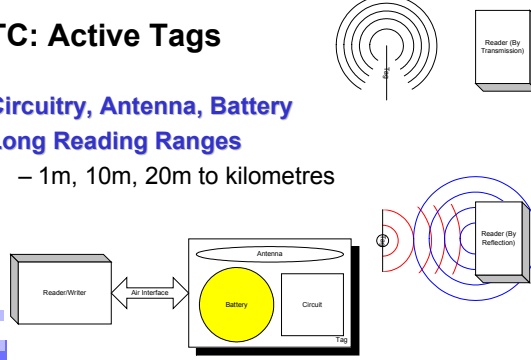
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TC: Active Tags

Circuitry, Antenna, Battery

Long Reading Ranges

- 1m, 10m, 20m to kilometres



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HD: Hardware

- Desktop
- PDC - Portable Data Collector
- Mobile Phones
- Tablet PC's



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HD: Communications

- Wireless Networking
- Mobile Phone - GSM, GPRS, 3G
- LAN (local), WAN (Wide)
- Device Connection
 - Serial, USB, Bluetooth, Firewire, IR, Integrated
- Watch Out For Sleeves and Connectors



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HD: Readers & Scanners

Converts Real Item To Electronic
Transmit & Receive In Various Combinations

Device Functionality

- Display, Programmable, Store, Time Stamp

Device Connection

- Serial, USB, Bluetooth, Firewire, IR, Integrated

Watch Out For Sleeves and Connectors

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DA: Data Access Components

- Tag
- Scanner
- Data Collector
- Routing
- Front End
- Transport System
- Middleware
- Database

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DA: Hierarchy

Hierarchical Data Collection
Associates Information According To Rules
Multiple Technologies

- RFID
- Barcode
- Keyboard

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DA: Contextual Routing

Dependent on The Hierarchy Position
Dependant On Application Focus

- Store Data
- Look Up Data
- Activate a Program
- Emulate Key Strokes
- Initiate Macros

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DA: Data Access

Database/Application Data

- SQL Server, Oracle, BAAN, SAP, MQ, DB2, MySQL, Access

Bespoke Systems

- Financial, Planning, Asset Management, Catalogue, GIS (Geographic)

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DA: Data Access

Middleware

- Communication, Synchronisation, Transaction, Searching, Rationalising, Converting, Compressing, Encrypting, Tracing, Distributing

Platforms

- DOS, Symbian, EPOC, WinCE, PALM, Linux, .NET, Windows

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AP: Applications

Bear In Mind

- The Variety
- Combined With The Demands
- Along With Investment
- Considering The Specialisation
- Adding Multiple Or Inline Standards

It's A Miracle Anyone Can Provide A Corporate Solution

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AP: The Approach

Remove Dependencies And Allow To Coexist

- Standards
- Technology
- Hardware
- Communication Mechanisms
- Data Access

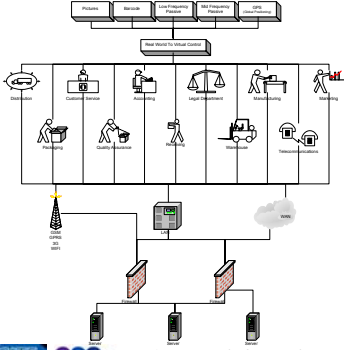
Consolidate Expertise According To Applications
Adopt Service Based IT Infrastructures
Share The Working Environment



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AP: Applications



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AP: Despatch Notes

Important Centre Of Project Activity

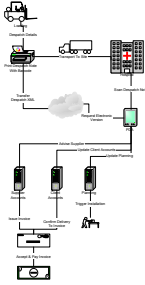
- Trigger Of Work Actions
- Acknowledgement Of Delivery
- Confirmation Of Despatch Received On Site
- Activation Of Invoicing
- Commencement Of Warranties
- Transfer Of Ownership

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AP: Despatch Notes

- Barcode Printed On Delivery Note
- XML Sent To Processing Sites
- Goods Despatched And Transported
- Arrive On Site
- Context Selected In Hierarchy
- Barcode Scanned
- Barcode Routes To Action
- XML Accessed
- Despatch Note Becomes Delivery Note
- Accounts Updated
- Planning Updated
- Traceability Achieved
- Supplier & Client Systems Coordinated



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AP: Trading Standards

Client & Suppliers Have Identifiable Data Formatting
Other Systems Can Extract Data In Different Contexts

- Serial Numbers & Warranties
- Cross Reference Planning Purchasing
- Populate O&M, PPM Systems

Data Can Be Presented In Application Relevant Formats
Cross Reference To Other Trading Documents

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Concrete Deliveries

- Batch Mixed
- Trucks Loaded
- Despatch Note & Instructions Printed
- XML Despatch Note & Instructions Sent
- Transport To Holding Area
- Acknowledge Arrival
- Instructed To Pour
- Acknowledge Pour
- Return For Next Load



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- AP: Applications

**Thank You For Your Time
Any Questions**

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