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Main applications of RFID along with various stages, software applications and hardware involved

Application- 1	LOGISTICS CHAIN MANAGEMENT SYSTEM IN FOOD AND PHARMA INDUSTRY.	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Airlines and shipping companies **2.** Ancillary Suppliers, **3.** Cargo Community Networks [CCN] which are made up of some of the other participants, **4.** Customs and Quarantine authorities, **5.** Freight forwarders, **6.** Fresh produce exporters, **7.** Fresh produce importers, **8.** Government agencies such as freight export information providers, **9.** Packer/cool store, **10.** Transporters including road haulers and carriers in the importing country.	**1.** Consignment **2.** Supplier **3.** Transport and **4.** Storage	**1.** Central database **2.** A communication secured network **3.** Internet with three interactive databases. **4.** Database and applications (data in a range of formats (maxima, minima, averages, graphical etc) **5.** Passive tag - RW
Application - 2	GLOBAL SUPPLY CHAIN OF SEMICONDUCTORS.	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. International suppliers **2.** Airport **3.** Customs agency **4.** Distributors **5.** Shipping dock **6.** Manufacturers	**1.** Transport **2.** Inventory **3.** Shipping **4.** Origin of port **5.** Transshipment port **6.** Destination port and **7.** A consignee	**1.** Program instructions can be in any appropriate form, such as source code, object code, or scripting code. **2.** Computing device: Enterprise servers, Application servers, point of sale terminal etc.. **3.** Passive tag - RW
Application - 3	SUPPLY CHAIN MANAGEMENT OF HIGH-VALUE ELECTRONIC ITEMS & PHARMACEUTICALS.	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Warehouse 2. Truck 3. Freight container 4. Sea vessel 5. Distribution center	1. Shipping 2. Recipient	1. Central data processor is operable for communication with an internet router. 2. Low frequency tag ? 300 KHz
Application - 4	TRACKING SYSTEM	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Assembly line 2. Warehouse	1. Package handling 2. Baggage handling 3. Parts assembly 4. Navigation through marked waypoints 5. Item retrieval and packaging 6. Inventory control	1. Business applications (cause sorting and loading instructions to appear on the items so that wearer?s of the data acquisition and display device do not have to read each item?s label.) 2. Passive tag

Application - 5	SUPPLY CHAIN MANAGEMENT.	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Storage facility 2. Shipping container 3. Shipping vessel 4. Airport 5. Shipyard 6. Military heavy assets 7. Warehouse 8. Factory	1. Shipping goods 2. Transportation (truck) 3. Retail or wholesale locations 4. Train depot 5. Inventory 6. Delivery 7. Outbound transit 8. Inbound transit 9. Advanced shipping notification	1. Firmware and software to modulate and demodulate the data for the particular protocol 2. Various communication algorithms and command response algorithms 3. UPS Supply Chain Solutions 4. Passive tag ? RW ? Low freq. or 900 MGz
Application - 6	INVENTORY ALONG A DISTRIBUTION CHAIN	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Distribution 2. Storing 3. Manufacturer (warehouse)	1. Inventory 2. Monitoring 3. Transportation 4. Tracking 5. Retailer or consumer 6. Wholesaler	1. Anti-collision software 2. Program for correlating the environmental condition data with the location data. 3. The data reporting medium is a computer display, a LAN, or a web page. 4. Active or passive tag- RW
Application - 7	ASSET AND MATERIALS MANAGEMENT SYSTEM.	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Lay down yard 2. Warehouse 3. Asset storage	1. Inventory 2. Shipping 3. Asset management 4. Tracking asset material a. Material identification information b. Description of the material c. Purchasing details d. Storage and maintenance details e. Material location and f. Destination information. 5. Receiving	1. Software applications (Web application" TagDetect") files may be in HTML format, XML or other formats. 2. Software applications supporting a client-server system or n-tiered computer system. 3. Internet and Central data repository 4. Active or passive tag - RW
Application - 8	POINT-OF-SALE AND POINT-OF-DELIVERY AND/OR DISTRIBUTION.	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Distribution 2. Micro-warehouse 3. Manufacturing 4. Marketing 5. Customer relation management	1. Point of sale 2. Delivery 3. Inventory 4. Billing	1. MW (Micro-warehouse) enterprise application 2. XML middleware such as Biz Talk.RTM. software. 3. ERP system, web ordering system 4. Passive tag ? RW - freq. - 2.45 GHz

Application - 9	REUSABLE TRANSPORTATION MEANS.	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Distribution	1. Tracking: a. Receptacle or b. Container or c. Packing or d. Pallet or e. Trolley car. 2. Wholesale distributor 3. Chain sales store	1. No Software application 2. Passive tag - RW
Application - 10	MATERIALS HANDLING	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Express mail 2. Storage	1. Transport 2. Tracking 3. Delivery	Software modules may include: 1. A database module configured to store data on the storage medium. 2. A decision module configured to determine the presence or absence of stale mail based on information provided by the database module.3. 3. Passive or active tag ? read only
Application - 11	COMMERCIAL ENTERPRISE (PERSONNEL AND ASSET RETENTION SYSTEM (PARS))	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Industrial sites 2. Power plants 3. Refineries and 4. Ports of entry	1. Tracking 2. Monitoring 3. Inventory 4. Security	1. Company databases are: a. Material management systems b. Procurement systems and c. Time and attendance systems. 2. Applications programming 3. Information access through standard formats such as XML and HTML. 4. Passive tag - RW
Application - 12	TRACKING CARGO THROUGH CUSTOMS.	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Airlines 2. Distributor	1. Shipping 2. Receiving 3. Tracking	1. Central server runs a program which acts as a central host for processing the information communicated between the different computers. 2. Passive tag - RW
Application - 13	SUPPLY CHAIN MANAGEMENT IN BEEF INDUSTRY.	
Place of events	**Process involved**	**Type of S/W & Hardware**
1. Factory	1. Identifying 2. Tracking	1. BeefLink.TM. Software (is a collection of components written primarily in VISUAL BASIC® 6.0 programming language and

	3. Monitoring 4. Livestock production and processing cycle 5. Inventory	ACTIVE X® programming methodologies.) 2. Inventory-type report can easily be generated. 3. MicroSoft Excel 4.Passive tag- read only