RFID AND BAR CODE FOR THE TELECOMM INDUSTRY

2005 Schedule
Venetian Hotel          October 27, 2005
Las Vegas, NV.        8:00 AM to 5:00 PM

Please share this brochure with your colleagues
COURSE DESCRIPTION:

This seminar will show how RFID, UID “Unique Identification”, bar code and other automatic identification and data collection (AIDC) technologies are used to enhance the entire enterprise. It will also show how to design and integrate automatic data collection technologies into your applications. This educational course is also designed to show how to understand and implement UID “Unique Identification”, EPC “Electronic Product Code” and RFID into your supply chain. UID and RFID have been mandated by the Department of Defense for all their suppliers to enhance their global supply chain.

Note: Seminars can also be held on-site or on-line using WEBEX.

Free Self Paced CDs:
As part of the course you will receive a work book and training CDs. The CDs contain a self paced course, which your company can use to educate their staff. ($195 value)

RFID and Bar Code in the Telecomm Industry Seminar:

With increased pressure from local and global competition and the need for industry compliance, businesses are looking for ways to enhance their productivity and lower manufacturing, warehousing and distribution costs. Telecommunications service providers (phone companies) also need an accurate picture of their asset base for accurately costing and pricing telephone services. To meet these challenges organizations are turning to RFID and Bar Code automatic identification and data collection systems. If your organization wants to increase productivity and learn the latest data collection technologies, this course is for you. This educational course is designed to show you how to understand and implement data collection technologies, like bar code and RFID in the telecommunications industry.

WHO SHOULD ATTEND?

Anyone involved in the implementation, management or use of bar code and other automatic identification and data collection applications. These include, but are not limited, to the following personnel:

- VP of Operations
- Material Management
- Quality Assurance
- Production
- Packaging Engineering
- Asset Tracking
- Logistics- Distribution
- Inventory
- Procurement Managers
- Warehousing
- Central Office
- Transportation
- Management Information Systems
- Industrial/Design Engineering
- Supply Chain Management
- Product Engineering/Management

COURSE LEADERS:

Two industry experts, Robert Fox and Robert W. Rylander are the course leaders. They are industry leaders with a combined total of more than 35 years’ experience in the AIDC industry.
Module 1- Understanding Radio Frequency Identification RFID

Advantages:
RFID tags speeds the collection of data in dirty, oily, wet or harsh commercial as well as industrial environments. RFID continues to emerge as a major automatic identification technology. RFID is often embedded in systems with other technologies, such as bar code and RFDC data collection. Unlike bar code, RFID tags are virtually impossible to copy. The technology is ideal for confidential identification of people or assets. RFID is fast: Tags and readers communicate in some cases up to 1000 times per second. RFID will read through dirt, paint and cement. Learn how RFID works and whether to select a Passive or Active system. Select the right reader and transponder for your application.

How RFID Works:
What is RFID?
Wireless Communication and Air Interface
Frequency / Data Read Rate / Applications
Transponders/Tags
Active Tags
Semi-Active / Semi-Passive Tags
Passive Tags
Storage Capacity
Environmental Controls
Anti-Collision Capability
Readers Configurations
Duplicate Removal
Smart Label Printers
RFID Standards
Programming
Physical Packaging

Applications for RFID:
Warehouse Management
Yard Management

MODULE 2 - Symbology Overview 1D / 2D / Matrix

There will be a historical review of symbologies and an overview of complementary automatic identification technologies. The most popular linear and 2D Stacked/Matrix symbologies, which are in use throughout the world, will be covered in detail.

Linear Symbologies
- Code 39
- Code 11
- Code 128
- Interleaved 2 of 5

2D and Matrix Symbologies
- PDF 417
- Data Matrix
- Micro PDF417

Module 3- Printing Techniques for RFID Smart Labels and bar codes

Selection of the proper printing technology for your application is imperative for successful implementation of an RFID / bar code system. Explore the options of producing media on-site or through a service bureau. Learn a variety of technologies used to create the RFID tags / bar codes labels, direct marking and select the best technology for your application.

Dot Matrix
RFID Smart tag printing
Direct Marking
Portable Printers
Pre Printed labels (InfoDot)

Module 4 - Scanning and Data Collection Terminals

A major decision is the selection of the right type of scanning and data collection devices for a particular application. How these devices function in order to capture vital information will be covered within this module. Also covered will be all of the major data collection terminals and scanning methods, which are in use today and how they are used in various applications. RFDC 802.11 and Bluetooth and Infrared technologies will be covered in detail.

Scanning Technologies
- Fundamentals
- Decode Functions
- Wand
- CCD
- Image Technology
- Laser
- Industrial Scanners

Data Collection Terminals
- RFDC Terminals
  - 802.11 / Blue Tooth / Infrared
  - RF site survey and Access Point locations
- Shop Floor Terminals
- RFID / Bar Code Readers
  - Hand Held
  - Fixed
- PDA Technologies

RFID Workshop
Testing of Tags on various Packaging
**Module 5- Verification of 1D/ 2D / Matrix codes / RFID**

Most bar code application standards today require verification of a bar code label in accordance with the ISO/IEC 15415 and ANSI X3.182 Print Quality Guide-line. This is in order to obtain the highest readability of the bar code. You will learn why and how to establish a bar code verification program within your organization.

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**Label Placement**  
Primary Failure Causes  
2D Verification Workshop  
Corrective Actions

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**Module 6- Understanding the Electronic Product Code and the DOD UID (Unique Identification)**

**The structure of EPC**  
The Savant  
ONS (Object Name Server)  
PLM (Physical Markup Language)

**What is UID?**  
Who is required to adhere to UID  
Data, Application and Text elements  
UID structure/constructs  
Recommended telecommunications  
Industry Constructs

**DOD RFID Structures**

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**MODULE 7 – LABELING OVERVIEW**

Telecommunications service providers (“telephone companies”) will be accepting 2-D symbols (without an additional linear bar code) on products by April 1, 2006. Equipment manufacturers need to mark their equipment and service providers need to prepare ALL their systems (hardware and software) NOW to receive the data from the 2-D symbols. Some manufacturers are already shipping products with 2-D labels. You will learn the details of creating both linear and 2-D telecommunications product labels per the Telcordia document: GR-383-CORE and the ATIS Product Marking Implementation Guideline, ATIS-0300038. A discussion of the issues with label layout, how to create the 2-D symbols, including using the ANSI MH10.8.3 (ISO/IEC 15434) syntax. The session provides a walk-through of the product marking documents and guidelines. You will also learn about the product package, shipping and cable reel labels specified by the industry in the ATIS Implementation Guide for Package Labeling, ATIS-0300006. The end of plug-in card package label, which allows a 2D symbol containing the package information, will also be discussed.

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**MODULE 8 - GLOBAL STANDARDS**

Are your customers requiring you to adhere to bar code standards? Learn the latest retail and industrial standards, which are now being used. Learn how to take advantage of the industrial, retail and telecommunications standards for product, package and shipping applications. The most popular global standards will be reviewed.

- ANSI MH10.8.3 (ISO/IEC 15434) – Transfer Syntax for High Capacity ADC Media  
- ANSI MH10.8.2 (ISO/IEC 15418) - Data Application Identifier Standard  
- ATIS-0300005 - Product Identification Coding Schemes  
- TCIF-98-005 - Product Serialization Guideline  
- CEA-802 - Product Marking Standard  
- ATIS-0300038 - Product Marking Implementation Guideline  
- Telcordia GR-383-CORE (for CLEI code labels)  
- ANSI MH10.8.1 - Linear bar code and two-dimensional symbols used in shipping, receiving, and transport applications  
- CEA-556 - Outer Shipping Container Bar Code Label Standard  
- ATIS-0300006 - Implementation Guide for Package Labeling  
- ATIS-0300044 - Guidelines for the Identification and Bar Code Labeling of Cable Reels  
- ATIS-0300045 - Machine-readable Manifest Guidelines for Cable Reels

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**MODULE 9 - POTENTIAL APPLICATIONS / CASE STUDIES – IN THE TELECOMMUNICATIONS INDUSTRY**

You will learn AIDC solutions used in the telecommunications industry:

- Receiving  
- Document Tracking  
- Inventory  
- Shipping  
- Network equipment asset management  
- Network equipment maintenance  
- Network Equipment Inventory  
- RFID in dispatch, inventory & asset management
Robert H. Fox has been involved with bar codes and automatic identification for the past 17 years. He currently provides consulting services for the implementation of automatic identification systems for telephone companies and equipment manufacturers. He chairs the telecommunications industry (ATIS – the Alliance for Telecommunications Industry Solutions) Bar Code/Standard Coding Committee (BCSC), which develops AIDC guidelines for product, package and shipping labels. He also participates on the Consumer Electronics Association (CEA) Automatic Data Capture Committee, which sets national standards for bar code usage for the electronics industry, on the ANSI MH10 Subcommittee 8, which sets national material handling labeling standards and on the U.S. Technical Advisory Group for international standards for bar code print quality, data structure, radio frequency identification (RFID) and equipment conformance. Mr. Fox has provided guidelines for specifying and selecting bar code label materials and print technology, as well as specifications and training to telecommunications companies to incorporate bar code technology; procure bar code labels; select bar code scanners, portable data collectors and bar code printers for several tracking and inventory projects. He is currently leading the telecommunications industry on a new initiative to explore the uses and benefits of RFID technology in the telecommunications supply chain. He has written a white paper on RFID for the Telecommunication Industry.

Fees: $350.00

10% discount for one of the following:
1. Three or more attendees from the same company.*
2. Registration 30 days prior to the seminar date.*

* Registration forms received on or after September 29, will be charged the full rate of $350.

Cancellations:
A registered participant may receive a refund of the fee paid, minus a ten dollar ($10) processing fee, if ATIS is notified in writing of the cancellation prior to ten (10) calendar days from the start of the meeting. Address cancellation notifications to Veronica Lancaster, BCSC Committee Administrator via email at vlancaster@atis.org or via US Postal Mail at ATIS, 1200 G Street, NW, Suite 500, Washington, DC 20005. Substitutions may take place at any time with written notification to ATIS regarding the substitution. Address substitution notifications to Veronica Lancaster, BCSC Committee Administrator via email at vlancaster@atis.org or via US Postal Mail at ATIS, 1200 G Street, NW, Suite 500, Washington, DC 20005.

Fees Include:
- Course Materials
- Training CD and Workbook
- Continental Breakfast and Lunch
- Completion Certificate
RFID and Bar Code for the Telecommunications Industry

SEMINAR REGISTRATION FORM

Las Vegas, Nevada
October 27, 2005

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NOTE: IN THE EVENT YOU NEED TO CANCEL, PLEASE SEE THE CANCELLATION POLICY BELOW.

*10% discount for early registration! Must register before COB September 28, 2005 to receive this discount!

Early Registration Fee: $332.00 per person
*10% discount for three or more attendees from the same company!
Registration Fee (3rd or more person from same company): $332.00 per person
Registration Fee After September 28, 2005: $350.00 per person

$_______ Total Conference Fee

Payment:

- Check (payable to ATIS)
- American Express
- MasterCard
- Visa

Credit Card No. ____________________________ Expiration Date ________
Authorized Signature ________________________

(Physical Signature Required!)

V Code: ______ (last 3 digits in the signature box on the back of your credit card) Required for MasterCard and Visa

Please send payment to:
Alliance for Telecommunications Industry Solutions (ATIS)
1200 G Street, NW, Suite 500
Washington, DC 20005
Attention: Veronica Lancaster
Phone: (202) 434-8826
Fax: (202) 393-5467

Deadline for Registering with ATIS: September 28, 2005

ADA Compliance: It is the policy of ATIS to ensure that all of our activities are accessible to qualified persons with disabilities in accordance with the Americans with Disabilities Act. If you need special accommodations to fully participate, please provide a written description and attach.

Cancellation Policy: A registered participant may receive a refund of the fee paid, minus a ten dollar ($10) processing fee, if ATIS is notified in writing of the cancellation prior to ten (10) calendar days from the start of the meeting. Address cancellation notifications to: ATIS, 1200 G Street, NW, Suite 500, Washington, DC 20005.