

# **Intelligent Transportation System**

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*Architecture Development*

## **Standards and Protocols Catalog**

*Special Studies Standards Task*



U.S. Department  
of Transportation

**Federal Highway  
Administration**



March 1, 1995

Dear ITS Standards Catalog Recipient,

I am pleased to share with you this first edition of the ITS Standards Catalog, an important step in the understanding and planning of standards and protocols for the ITS industry. This edition was prepared by Robert Barrett of the Jet Propulsion Laboratory under contract to the FHWA, with the consultation and cooperation of the ITS America Committee on Standards & Protocols, the Advanced Public Transport Systems (APTS) Committee, and the Advanced Traffic Management Systems (ATMS) Committee.

This first edition focuses primarily on the ITS-related standards that already exist, and as you will see, it is an impressive and broad based collection. The catalog should provide guidance to the ITS industry on existing standards relevant to the development of ITS products and services. The next stage of catalog development is to expand its purview to include work on standards that are in-process or that are perceived as needed but not yet being addressed.

In addition, the content of the catalog is being made available on the International ITS Information Clearinghouse operated by ITS America.

I invite your comments, corrections, and suggestions for its refinement, expansion and improvement. Its primary objective always is to be of service to the ITS industry.

Richard J. Weiland, Chairman  
ITS America Standards & Protocols Committee

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## **Overview**

The Federal Highway Administration (FHWA), U. S. Department of Transportation (USDOT), tasked the Jet Propulsion Laboratory (JPL) to act as the Architecture Manager for the development of the Intelligent Transportation System (ITS) Architecture. JPL identified a Standards Task, which recognizes the importance of standards that will permit rapid emergence of the many user services that make up ITS. FHWA also recognized that appropriate standards facilitate an open system architecture, maximizing competition for a spectrum of products.

With more than 350 standards developing organizations (SDOs) in the United States, FHWA and JPL recognized that system developers and designers could use assistance in identifying specific standards and protocols for the ITS and its components. This problem identification led to a task to develop an ITS Catalog of Standards and Protocols. At the same time Intelligent Transportation Society of America's (ITS-AMERICA) Standards and Protocol Committee was forming a Standards and Protocols Catalog Task Force with similar goals in mind. A single catalog is being developed to satisfy both the FHWA's and ITS-AMERICA's needs.

The catalog will serve two primary functions:

- It will serve as the overall guide for exploring standards requirements and the coordination of standards development by standards developing organizations.
- It will provide an easily accessible summary of ITS standards and protocol status, which tracks each needed standard through the various stages of development.

The catalog, which will clearly evolve over time, will contain both technology standards and interface protocols. Drafts of the catalog will be made available to the community for comment and further contribution.

Early in the development of the catalog it was decided to include existing standards and protocols, developing (draft) standards and protocols, and newly identified (proposed) standards and protocols being developed over the next five years. At the same time it was determined that the various committees and subcommittees of ITS-AMERICA would be an excellent source of information for the standards and protocols believed necessary. The response from ITS-AMERICA committees and subcommittees represents more than 75 percent of the standards and protocols identified in the catalog.

**Standards** and protocols needed to support a nationwide ITS will continue to be identified and developed as the ITS architecture and design progress.

## **JPL D-12066 Rev A**

### REVISION “A” CHANGES TO CATALOG

The catalog content grew by more than 75 percent, from 153 entries to 268 entries, from the first to this second version. Significant additions to the content include:

Inputs from ITS-America Advance Public Transportation Committee,

Inputs from ITS-America Safety and Human Factors Committee,

Inclusion of International Standards Organization Technical Committee 204, Traffic Information and Control Systems (ISO TC-204, TICS) new work and proposed work items, and

Inclusion of uniquely identified **standards** and protocols from the Phase I Architecture Development Final Report by the four development teams.

Mechanical changes to the catalog include:

Increasing the size of the title field of the database to allow the full title of the standard or protocol to be provided,

Increasing the size of the abstract field of the database to allow a more complete explanation of the standard or protocol, and

Filling the abstract field of the database where ever possible with a description of the standard.

### ACKNOWLEDGEMENTS

The author would like to thank the **following** ITS-AMERICA Committees, and their members, for providing the inputs to this second version of the catalog:

Advanced Public Transportation Systems (ARTS) Committee,

Control Systems and Systems Interface Subcommittee, Advanced Traffic Management Systems (ATMS) Committee, and

Safety and Human Factors Committee.

**JPL D-12066 Rev A**

**ADDITIONAL INFORMATION**

Additions and/or corrections to the catalog are requested. The input form (see page ix) should be used as a guide for the additions. Please forward all corrections and additions to:

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## **Catalog Development**

The need behind an ITS Standards and Protocols catalog is simply to develop a repository for identified and needed standards and protocols. Expansion of the requirement led to the belief that a catalog user might have many different needs for viewing or recalling the data, for example by developing organization, by application or by service group (Advanced Traveler Information System [ATIS]). Databases allow one to sort and display information or records by various fields to meet the users needs.

### CATALOG ACTIVITIES

A Standards and Protocol Catalog Task Force meeting, as part of the ITS-America activities, was held during the Transportation Review Board meeting, January 1994, in Washington, D.C. Invitations were sent to a number of interested parties. During the meeting of the Task Force the content and scope of the catalog was agreed to, as was the general plan to provide inputs to the catalog. Additionally concurrence was received on the plan to solicit standards and protocols information from the many ITS-America committees and subcommittees. The results of these activities are included herein.

Future activities for the catalog include:

Addition of a cross reference field to identify common standards issued by both national and international groups.

“Filling” the abstract field.

Follow-up solicitation of Standards and Protocols information from the ITS-America committees, subcommittees and task forces (January 1995).

Solicitation of Standards and Protocols information from the Standards Developing Organizations currently supporting ITS-America (February 1995).

Solicitation of Standards and Protocols information from the International Standards Organization Technical Committee 204, Transport Information and Control Systems, (ISO TC204, TICS) Technical Advisory Group (TAG) and Working Advisory Groups (WAGS) (February 1995).

Meeting of the ITS-America Standards and Protocols Task Force with TRB activities (January 1995).

Update and submit the catalog on a quarterly basis (April 1995, July 1995).



## CATALOG REPORT ORGANIZATION

The nature of a relational database, such as is being used to compile the catalog, allows one to sort on any field in the database, a combination of fields, and information within one or more of the fields in structuring the report. This results in a great number of possibilities for the organization of a report, many of which would be of limited use. This report on the Standards and Protocol Catalog is organized by application and status.

### SERVICE GROUPS

For the purpose of this version of the catalog ITS User Services are grouped under headings as follows:

#### SERVICE GROUP

#### USER SERVICE

Advanced Traffic Information  
Systems (ATIS)

Pre-Trip Travel Information  
En-Route Driver Information  
Route Guidance  
Ride Matching and Reservation  
Traveler Services Information

Advanced Traffic Management  
Systems (ATMS)

Traffic Control  
Incident Management  
Travel Demand Management  
Emergency Notification and Personal  
Security  
Emergency Vehicle Management

Advanced Public Transportation  
Systems (APTS)

Public Transportation Management  
En-route Transit Information  
Personalized Public Transit  
Public Travel Security

Electronic Toll Collection (ETC)

Electronic Payment Services

Commercial Vehicle Operations  
(CVO)

Commercial Vehicle Electronic Clearance  
Automated Roadside Safety Inspection  
On-board Safety Monitoring  
Commercial Vehicle Administrative  
Processes  
Hazardous Material Incident Report  
Commercial Fleet Management

**JPL D-12066 Rev A**

Advanced Vehicle Safety Systems

Longitudinal Collision Avoidance  
Lateral Collision Avoidance  
Intersection Collision Avoidance  
Vision Enhancement for Crash Avoidance  
Safety Readiness  
Pre-Crash Restraint Deployment  
Automated Highway System

Advanced Rural Transportation  
Systems (ARTS)

See ATIS

**Input Form**

Information is required on each standard and protocol identified for inclusion with in the catalog. Specifically, the minimum information required is shown below, as extracted from the input form for the catalog and ordered to agree with the output report:

- Application:** Current application of the standard.
- Number:** Identification number established by standard developing organizations.
- Organization:** Organization publishing the standard or protocol.
- Title:**
- Abstract:** Brief synopsis of standard.
- Projected Use:** ITS application.
- Service Group:** Service bundles in which it is expected the standard will be used.
- Status:** Current status of the standard.
- Estimated Completion Date:** Scheduled completion date for draft and proposed standards and protocols..

Intelligent Transportation System  
STANDARDS AND PROTOCOL CATALOG  
Revision A

**Architecture**

NUMBER : ANSI D20.1  
ORGANIZATION : American National Standards Institute  
TITLE : State's Model Motorist Data Base: Data Element Dictionary  
ABSTRACT :

PROJECTED USE : Architecture  
SERVICE GROUP : All  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : Circular 412  
ORGANIZATION : Transportation Research Board  
TITLE : Intelligent Vehicle-Highway System (IVHS) Primer  
ABSTRACT : The primer is a dictionary of IVHS terms and acronyms and a compendium of IVHS operation and test systems. Additionally provides information on system and component design.

PROJECTED USE : Architecture  
SERVICE GROUP : All  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : J1760  
ORGANIZATION : Society of Automotive Engineers  
TITLE : Information Report (IR) - Compendium of Emerging IVHS Technologies  
ABSTRACT : An introduction to existing IVHS/ITS equipments and components currently under development or being marketed. Includes descriptions of ITS systems such as route guidance.

PROJECTED USE : Architecture  
SERVICE GROUP : All

**Architecture**

STATUS : Draft EST-COMP DATE : Dec 1995

NUMBER : J1761

ORGANIZATION : Society of Automotive Engineers

TITLE : Recommended Practice (RP) TICS System Architecture, Terms and Definitions.

ABSTRACT : A dictionary of terms and definitions from US and international (TICS/ ISO TC204) efforts in ITS.

PROJECTED USE : Architecture

SERVICE GROUP : All

STATUS : Draft EST-COMP DATE : Dec 1995

NUMBER : J1762

ORGANIZATION : Society of Automotive Engineers

TITLE : Recommended Practice Standards for System Architecture Documentation.

ABSTRACT : A "How to" on documenting system architecture.

PROJECTED USE : Architecture

SERVICE GROUP : All

STATUS : Draft EST-COMP DATE : Dec 1995

NUMBER : J1763

ORGANIZATION : Society of Automotive Engineers

TITLE : Information Report - A Conceptual IVHS Architecture: an ATIS Perspective.

ABSTRACT : An overview conceptual framework for ITS Architecture and Protocols. Emphasis on communications.

PROJECTED USE : IVHS Information

SERVICE GROUP :

STATUS : Proposed EST-COMP DATE : Sep 1994

NUMBER : NP1.1

ORGANIZATION : International Standards Organization

**Architecture**

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG1 Architecture, proposed effort.

PROJECTED USE : Architecture

SERVICE GROUP : All

STATUS : Proposed

EST-COMP DATE : 1997

NUMBER : NP1.2

ORGANIZATION : International Standards Organization

TITLE : Reference Model Architecture.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG1 Architecture, proposed effort.

PROJECTED USE : Architecture

SERVICE GROUP : All

STATUS : Proposed

EST-COMP DATE : 1997

NUMBER : NP1 .3

ORGANIZATION : International Standards Organization

TITLE : AVI/AEI Architecture and Terminology

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG1 Architecture, proposed effort.

PROJECTED USE : Architecture

SERVICE GROUP : All

STATUS : Proposed

EST-COMP DATE : 1997

NUMBER : PW11 .1

ORGANIZATION : International Standards Organization

TITLE : Standard Terminologies for Reference Models, Architectures, & Taxonomy.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG1 Architecture, proposed effort.

PROJECTED USE : Architecture

Thursday, December 15, 1994

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**Architecture**

SERVICE GROUP : All

STATUS : Proposed

EST-COMP DATE : 1996

NUMBER : PWI1 .2

ORGANIZATION : International Standards Organization

TITLE : Data Models &amp; Data Dictionaries

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG1  
Architecture, proposed effort.

PROJECTED USE : Architecture

SERVICE GROUP : All

STATUS : Proposed

EST-COMP DATE : 1996

NUMBER : PWI1 .3

ORGANIZATION : International Standards Organization

TITLE : AVI/AEI Requirements for DSRC

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG1  
Architecture, proposed effort.

PROJECTED USE : Architecture

SERVICE GROUP : All

STATUS : Proposed

EST-COMP DATE : 1996

NUMBER : PWI1 .4

ORGANIZATION : International Standards Organization

TITLE : AVI/AEI Intersystem Interface Requirements

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG1  
Architecture, proposed effort.

PROJECTED USE : Architecture

SERVICE GROUP : All

STATUS : Proposed

EST-COMP DATE : 1996

**Architecture**

NUMBER : PWII .5  
ORGANIZATION : International Standards Organization  
TITLE : AVI Systems Requiements  
ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG1  
Architecture, proposed effort on automated vehicle identification (AVI).  
PROJECTED USE : Architecture  
SERVICE GROUP : All  
STATUS : Proposed EST-COMP DATE : 1996



### Automated Vehicle Control

NUMBER : NP14.1  
ORGANIZATION : International Standards Organization  
TITLE : Monitor/Warning/Advice Systems for: Forward obstacles & traffic impediments, rear/corner obstacles, side obstacles, blind curves  
ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG14, Vehicle/Roadway Warning & Control Systems, proposed effort.  
PROJECTED USE : Automated Vehicle Control  
SERVICE GROUP : Vehicles  
STATUS : Proposed EST-COMP DATE : 1997

NUMBER : PW14.1  
ORGANIZATION : International Standards Organization  
TITLE : Adaptive cruise control  
ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG14, Vehicle/Roadway Warning & Control Systems, proposed effort.  
PROJECTED USE : Automated Vehicle Control  
SERVICE GROUP : Vehicles  
STATUS : Proposed EST-COMP DATE : 1996

**Automated Vehicle Location**

NUMBER : Title 21  
ORGANIZATION : California State Code of Regulations  
TITLE : AVI Compatibility Specification  
ABSTRACT : Specification for Automated Vehicle Location transponder requirements.  
PROJECTED USE : Automated Vehicle Location  
SERVICE GROUP : ATMS, APTS, ETC  
STATUS : Law EST-COMP DATE : Complete

NUMBER : VDV 04.05.2  
ORGANIZATION : Verband Deutscher Verkehrsunternehmen  
TITLE : Technical Requirements for Location Beacon Systems  
ABSTRACT : Defines protocols and data formats for communications between infrared and microwave wayside beacons and transit vehicles. Defines formats for location, change in voice radio channel and traffic signal preemption. (German Association of Public Transport)  
PROJECTED USE : Automated Vehicle Location  
SERVICE GROUP : APTS, AVL  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : VDV 04.05.5  
ORGANIZATION : Verbund Deutscher Verkehrsunternehmen  
TITLE : Radio Data Interface  
ABSTRACT : Defines Protocols and data formats to be used in interface between the central computer and radio system in transit Automatic Vehicle Location/Control (fleet management) system. (German Association of Public Transport Operators)  
PROJECTED USE : AVL, Control  
SERVICE GROUP : APTS, AVL, Vehicles  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : VDV 300  
ORGANIZATION : Verbund Deutscher Verkehrsunternehmen

**Automated Vehicle Location**

TITLE : Integrated On-Board Information systems (IBIS)

ABSTRACT : Defines physical characteristics of on-board transit computers, peripherals, interconnecting wiring and connectors, protocols and message structures for busses and light rail. (German Association of Public Transport Operators)

PROJECTED USE : AVL, control

SERVICE GROUP : APTS, AVL, Vehicles

STATUS : Approved EST-COMP DATE : Complete

**Banking**

NUMBER : ISO 4909:1987  
ORGANKATION : International Standards Organization  
TITLE : Bank Cards - Magnetic Stripe data for track 3.  
ABSTRACT : Magnetic card format for electronic banking data.  
PROJECTED USE : Electronic funds transfer  
SERVICE GROUP : APTS, CVO, ATMS, vehicles.  
STATUS : Approved EST-COMP DATE : 1987

NUMBER : PWI5.4  
ORGANKATION : International Standards Organization  
TITLE : FTC Applications for IC Cards  
ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG5, Fee & Toll Collection (FTC), proposed effort.  
PROJECTED USE : Banking  
SERVICE GROUP : ATIS, APTS, CVO  
STATUS : Proposed EST-COMP DATE : 1996

# Standards and Protocols Catalog

## CVO

NUMBER : PWI7.1  
 ORGANIZATION : International Standards Organization  
 TITLE : Establish & define operational levels for Commercial/Freight (C/F) applications.  
 ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG7, Commercial/Freight (C/F), proposed effort.

PROJECTED USE : CVO

SERVICE GROUP : CVO

STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PWI7.2  
 ORGANIZATION : International Standards Organization  
 TITLE : For each level defined in PWI7.1 determine C/F operations requirements for WG's 1, 5,6,14,15, and 16.  
 ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG7, Commercial/Freight (C/F), proposed effort.

PROJECTED USE : CVO

SERVICE GROUP : CVO

STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PWI7.3  
 ORGANIZATION : International Standards Organization  
 TITLE : Identify requirements for International Standards pertaining to C/F.  
 ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG7, Commercial/Freight (C/F), proposed effort.

PROJECTED USE : CVO

SERVICE GROUP : CVO

STATUS : Proposed EST-COMP DATE : 1996

## Communications

NUMBER :

ORGANKATION : American Society for Test and Materials

TITLE : Standard for Dedicated, Short Range Two-Way Vehicle to Roadside  
Communications Equipment

ABSTRACT : Draft standard and protocol for beacon to vehicle and return communications.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, ETC, Vehicles, APTS

STATUS : Draft EST-COMP DATE : 1995

NUMBER :

ORGANIZATION : Joint EIA/TIA

TITLE : Cellular Digital Packet Data Specification, Release 1

ABSTRACT : Cellular Digital Packet Data (CPDP) specification for data communications over the  
existing AMPS cellular analog voice mobile system.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO, Vehicles

STATUS : Draft EST-COMP DATE : 1997

NUMBER :

ORGANKATION : Society of Automotive Engineers

TITLE : ITIIS Bearer Application Protocol (BAP)

ABSTRACT : Network level protocol for International Travelers Information Interchange System  
(ITIIS) message transmission by a specified communications system. Each  
communications system would use a seperate network application protocol.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, APTS, other

STATUS : Draft EST-COMP DATE : Dec 1995

NUMBER :

ORGANIZATION : Society of Automotive Engineers

TITLE : ITIIS Bearer Independent Format (BIF) Protocol

**Communications**

ABSTRACT : Transport layer message protocols, formats and contents for transmission of traffic data from traffic management/information center to vehicle, traveler or driver.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, APTS others

STATUS : Draft EST-COMP DATE : Dec 1995

NUMBER :

ORGANIZATION : Society of Automotive Engineers

TITLE : Information Report, 9 1 1 Message List

ABSTRACT : Message list for cellular telephone 9 1 1 calls. Appropriate for two-way signaling using very short tone bursts.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, ARTS

STATUS : Proposed EST-COMP DATE : 1995

NUMBER : ANSI T1.105-88

ORGANIZATION : American National Standards Institute

TITLE : Digital hierarchy optical interface.

ABSTRACT :

PROJECTED USE : Communications

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : C95.1-1992

ORGANIZATION : Joint ANSI/IEEE

TITLE : Safety levels with respect to human exposure to radio frequency electromagnetic fields, 3 kHz to 300 GHz.

ABSTRACT : Standard specifies maximum power densities tolerable in a 30 minute time period.

PROJECTED USE : Communications, Safety

**Communications**

SERVICE GROUP : ATIS, APTS, CVO, ATMS

STATUS : Approved

EST-COMP DATE : Nov 1992

NUMBER : css 7

ORGANIZATION : Consultative Committee for International Telegraph and Telephone

TITLE : CCITT Specification for Signaling System 7

ABSTRACT : A common-channel signalling system, using packet switching and tailored to the ISO OSI, provides data-handling referred to as Integrated Service Data Network - includes layers 4 to 7 of the OSI model.

PROJECTED USE : Communications

SERVICE GROUP : ATIS

STATUS : Approved

EST-COMP DATE : 1984

NUMBER : EIA IS-51

ORGANIZATION : Electronics Industry Association

TITLE : Emission Limitation for AM Broadcast Transmission.

ABSTRACT : AM broadcast emission limits.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, ATIS

STATUS : Approved

EST-COMP DATE : Complete

NUMBER : EIA IS-52

ORGANIZATION : Electronics industry Association

TITLE : Uniform Dialing Procedures and Call Processing Treatment for Use in Cellular Radio Telecommunications.

ABSTRACT : Cellular telephone, dialing and call processing.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, ATIS

STATUS : Approved

EST-COMP DATE : Complete



**Communications**

NUMBER : EIA RS-250-B  
ORGANIZATION : Electronics Industry Association  
TITLE : Electrical Performance Standards for Television Relay Facilities.  
ABSTRACT :

PROJECTED USE : Communications  
SERVICE GROUP : ATMS, ATIS, APTS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-210  
ORGANIZATION : Electronics Industry Association  
TITLE : Terminating and Signaling Equipment for Microwave Communication Systems, Part 1: Telephone Equipment.  
ABSTRACT : Microwave telephone service termination and signaling.

PROJECTED USE : Communications  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-220  
ORGANIZATION : Electronics Industry Association  
TITLE : Minimum Standards for Land Mobile Communications CTCSS.  
ABSTRACT :

PROJECTED USE : Communications  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-334-A-1

### Communications

ORGANIZATION : Electronics Industry Association  
 TITLE : Signal Quality at Interface between Data Terminal Equipment and Synchronous Data Circuit-Terminating Equipment for Serial Data Transmission  
 ABSTRACT : Communications signal quality requirements.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-439  
 ORGANIZATION : Electronics Industry Association  
 TITLE : Engineering Specifications Format for Color CCTV Camera Equipment  
 ABSTRACT :

PROJECTED USE : Communications  
 SERVICE GROUP : ATMS, APTS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-440-A  
 ORGANIZATION : Electronics Industry Association  
 TITLE : Fiber Optic Terminology  
 ABSTRACT : Definitions of terms used with fiber optic communications systems, fiber, transmitters, receivers, cables, connectors and splices.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA455-1A  
 ORGANIZATION : Electronics Industry Association  
 TITLE : Cable Flexing for Fiber Optic Interconnecting Devices.  
 ABSTRACT :  
 Thursday, December 15,1994

### Communications

PROJECTED USE : Communications  
 SERVICE GROUP : ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-462  
 ORGANIZATION : Electronics Industry Association  
 TITLE : Electrical Performance Standards for Television Broadcast Demodulators.  
 ABSTRACT : Television receivers, performance standards.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATMS, APTS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-465  
 ORGANIZATION : Electronics Industry Association  
 TITLE : Group 3 Facsimile Apparatus of Document Transmission.  
 ABSTRACT : Facsimile (FAX) communications and equipment.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-466  
 ORGANIZATION : Electronics Industry Association  
 TITLE : Procedures for Document Facsimile Transmission.  
 ABSTRACT : Procedures for document facsimile transmission.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-470~A

**Communications**

ORGANKATION : Electronics Industry Association  
TITLE : Telephone Instruments with Loop Signaling.  
ABSTRACT : Telephone communications loop signaling requirements.  
PROJECTED USE : Communications  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-511  
ORGANIZATION : Electronics Industry Association  
TITLE : Manufacturing Message Specification-Service Definition and Protocol  
ABSTRACT : Message protocol.  
PROJECTED USE : Communications  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-TSB-19-86  
ORGANIZATION : Electronics Industry Association  
TITLE : Pulse Communications  
ABSTRACT :

PROJECTED USE : Communications  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA-316-C  
ORGANKATION : Joint EIA/TIA  
TITLE : Minimum Standards for Portable/Personal Radio Transmitters, Receivers, and Transmitter/Receiver Combination Land Mobile Communicators.  
ABSTRACT : Minimum standard for portable/personal radio transmitters receivers and transmitter/receiver combination land mobile communication Frequency Modulation

**Communications**

(FM) or Phase Modulation (PM) equipment, 25 to 1000 MHz.

PROJECTED USE : Communications

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA-455-A

ORGANIZATION : Joint EIA/TIA

TITLE : Standard Test Procedure for Fiber Optic Fibers, Cables, Transducers, Sensors, Connecting and Terminating Devices, and Other Fiber Optic Components

ABSTRACT : Standard test procedure for fiber optic fibers, cables, transducers, sensors, connecting and terminating devices, and other fiber optic components.

PROJECTED USE : Communications

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA-4644

ORGANIZATION : Joint EIA/TIA

TITLE : Private Branch Exchange (PBX) Switching Equipment for Voiceband Application.

ABSTRACT : Voiceband telephone switching equipment.

PROJECTED USE : Communications

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA-547

ORGANIZATION : Joint EIA/TIA

TITLE : Network Channel Terminal Equipment for DS1 Service.

ABSTRACT :

PROJECTED USE : Communications

**Communications**

SERVICE GROUP : ATMS EST-COMP DATE : Complete

STATUS : Approved

NUMBER : EIA/TIA-578

ORGANIZATION : Joint EIA/TIA

TITLE : Asynchronous Facsimile DCE Control Standard.

ABSTRACT :

PROJECTED USE : Communications

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA-579

ORGANIZATION : Joint EIA/TIA

TITLE : Acoustico-Digital and Digital-to-Acoustic Transmission Requirements for ISDN Terminals.

ABSTRACT : Transmission requirements for ISDN transmission of digital data.

PROJECTED USE : Communications

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA594

ORGANIZATION : Joint EIA/TIA

TITLE : Private Digital Network Synchronization

ABSTRACT : Digital network communications synchronization.

PROJECTED USE : Communications

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

### Communications

NUMBER : EWTWS-240-D  
 ORGANKATION : Joint EIA/TIA  
 TITLE : Minimum Standards for Land Mobile Communication Frequency Modulated or Phase Modulated Receivers, 25 to 866 MHz.  
 ABSTRACT : Minimum standard for Frequency Modulated (FM) and Phase Modulated (PM) radio.  
 PROJECTEDUSE: Communications  
 SERVICE GROUP : ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA/IS-41 .1 B  
 ORGANKATION : Joint EIA/TIA  
 TITLE : Cellular Radiotelecommunications Intersystem Operations: Functional Overview.  
 ABSTRACT : Cellular telephone, intersystem functional operations.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATMS, ATIS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA/IS-41.28  
 ORGANIZATION : Joint EIA/TIA  
 TITLE : Cellular Radiotelecommunications Intersystem Operations: Intersystem Handoff.  
 ABSTRACT : Cellular telephone, intersystem handoff (between systems) operations.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATMS, ATIS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA/IS41.3B  
 ORGANIZATION : Joint EIA/TIA  
 TITLE : Cellular Radiotelecommunications Intersystem Operations: Automatic Roaming.  
 ABSTRACT : Cellular telephone, automatic roaming operations.

## Communications

PROJECTED USE : Communications

SERVICE GROUP : ATMS, ATIS

EST-COMP DATE : Complete

STATUS : Approved

NUMBER : EIA/TIA/IS-41.5B

ORGANIZATION : Joint EIA/TIA

TITLE : Cellular Radiotelecommunications Intersystem Operations: Data Communications.

ABSTRACT : Cellular telephone, data communications operations.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, ATIS

EST-COMP DATE : Complete

STATUS : Approved

NUMBER : EIA/TIA/IS-54-A

ORGANIZATION : Joint EIA/TIA

TITLE : Cellular System Dual-Mode Mobile Station-Base Station Compatibility Standard.

ABSTRACT : Interim standard for Cellular telephone, base station standardization.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, ATIS

EST-COMP DATE : Complete

STATUS : Approved

NUMBER : EIA/TIA/IS-55

ORGANIZATION : Joint EIA/TIA

TITLE : Recommended Minimum Performance Standards for 800MHz Dual-Mode Mobile Stations.

ABSTRACT :

PROJECTED USE : Communications

SERVICE GROUP : ATMS

EST-COMP DATE : Complete

STATUS : Approved



### Communications

NUMBER : EIA/TIA/IS-553  
 ORGANIZATION : Joint EIA/TIA  
 TITLE : Advanced Mobile Phone System (AMPS)  
 ABSTRACT : The current (1994) cellular telephone system.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATIS, ATMS, CVO, APTS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA/IS-83  
 ORGANIZATION : Joint EIA/TIA  
 TITLE : Procedures for Automatic Inter-working between Automode Modems and Modems conforming to Recommendations V.32, V.22bis and V.22.  
 ABSTRACT : Procedures for interworking modems conforming to CCITT recommendations V.32, V.22bis and V.22.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA/IS-95  
 ORGANIZATION : Joint EIA/TIA  
 TITLE : Interium Standard, Mobile Station-Base Station Compatibility Standard for Dual Mode Wideband Spread Spectrum Cellular System  
 ABSTRACT : Code Division Multiple Access (CDMA). A cellular telecommunications scheme in which multiple users may simultaneously share a frequency as each is using a different code for their information transfer.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATIS, ATMS, APTS, CVO  
 STATUS : Draft EST-COMP DATE : 1996

NUMBER : FIPS 148  
 ORGANIZATION : National Bureau of Standards

**Communications**

TITLE : Federal Information Processing Standard, Government Open System Interface Procedures.

ABSTRACT : U.S. Government standard for ISO Open System Interconnection.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, ATIS, APTS, ARTS, CVO

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 802.2

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Standard for Local Area Networks: Logical Link Control.

ABSTRACT : Basic standard for ethernet and other local area networks. Also see IEEE 802.(3,4,5). Also ISO 880(2,3,4,5).

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO.

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 802.3

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : CSMA/CD Access Method and Physical Layer Specification.

ABSTRACT : Ethernet - Carrier Sensing Multiple Access/Collision Detecting protocol standard.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO.

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 802.4

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Token - Passing Bus Access Method and Physical Layer Specification.

ABSTRACT : Networking using token passing access protocol.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO.

**Communications**

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 802.5

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Token Ring Access Method and Physical Layer Specification.

ABSTRACT : Networking using token passing access protocol.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO.

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 802.6

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Dual Queue Data Bus - Metropolitan Area Network

ABSTRACT : Specification for a Metropolitan Area Network.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, APTS, ATIS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 823-89

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Standard methods for specifying voicegrade transmissions.

ABSTRACT : Voice communications requirements.

PROJECTED USE : Communications

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IS-54

ORGANIZATION : Telecommunication Industry Association

TITLE : Time Division Multiplex Access (TDMA) Cellular Telephone

## Communications

ABSTRACT : A method of providing digital voice telephony over cellular telephone communications links, by communicating in one of several time slots.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO, Vehicles

STATUS : Draft EST-COMP DATE :

NUMBER : ISO 8072:1984

ORGANIZATION : International Standards Organization

TITLE : Information Processing Systems - Open System Interconnection - Transport Service Definition

ABSTRACT : Defines the transport layer (layer 4) requirements for network service. Class 4, Type C is similar to, and based on MIL-STD 1778 Transport Control Protocol.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, APTS, ATMS, CVO

STATUS : Approved EST-COMP DATE : 1984

NUMBER : ISO 8073:1984

ORGANIZATION : International Standards Organization

TITLE : Information Processing Systems - Open System Interconnection - Connection-Oriented Transport Protocol Specification.

ABSTRACT : Defines the transport layer (layer 4) protocol requirements for network service. Class 4, Type C is similar to, and based on MIL-STD 1778 Transport Control Protocol.

PROJECTED USE : Communications

SERVICE GROUP : APTS, ATIS, ATMS, CVO

STATUS : Approved EST-COMP DATE : 1984

NUMBER : ISO 8571

ORGANIZATION : International Standards Organization

TITLE : Information Processing Systems - Open System Interconnection - File Transfer, Access and Management (FTAM)

ABSTRACT : A series of ISO standards dealing with files, storage and transfer.

PROJECTED USE : Communications

## Communications

SERVICE GROUP :

STATUS : Approved

EST-COMP DATE : Aug 1986

NUMBER : ISO 8822

ORGANIZATION : International Standards Organization

TITLE : Information Processing Systems - Open System Interconnection -  
Connection-Oriented Presentation Service Definition

ABSTRACT : Defines service for connection (circuit) presentation.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, APTS

STATUS : Approved

EST-COMP DATE : May 1986

NUMBER : ISO 8823

ORGANIZATION : International Standards Organization

TITLE : Information Processing Systems - Open System Interconnection -  
Connection-Oriented Presentation Service Protocol Specification

ABSTRACT : Protocol requirements for connection-oriented presentation service.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, AOPTS

STATUS : Approved

EST-COMP DATE : May 1986

NUMBER : ISO 9595

ORGANIZATION : International Standards Organization

TITLE : Information Technology - Open System Interconnect- Common Management  
Information Service Definition

ABSTRACT : Defines the common management information protocol (CMIP, analogous to TCP)  
and service.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, APTS, ATMS, CVO, Vehicles

STATUS : Approved

EST-COMP DATE : 1991

## Communications

NUMBER : ISO 9596  
 ORGANIZATION : international Standards Organization  
 TITLE : Information Technology - Open System Interconnect - Common Management Information Protocol (CMIP) Specification  
 ABSTRACT : CMIP is similar to TCP. CMIP provides a connection-oriented data-transfer service between users in order to overcome damage, loss, duplication and misordering of packets during transmission through multiple networks. May replace TCP about 2001.  
 PROJECTED USE : Communications  
 SERVICE GROUP : APTS, ATIS, ATMS, CVO, Vehicles  
 STATUS : Approved EST-COMP DATE : 1991

NUMBER : J1746  
 ORGANIZATION : Society of Automotive Engineers  
 TITLE : Recommended Practice for Traveler Information Service Message List.  
 ABSTRACT : Overall message list for all communications within an Intelligent Transportation System (ITS).  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATMS, APTS, ATIS, CVO, Vehicles  
 STATUS : Draft EST-COMP DATE : Sep 1995

NUMBER : MIL-STD 1777  
 ORGANIZATION : United States Department of Defense  
 TITLE : Internet Protocol (IP)  
 ABSTRACT : Internet protocol supports the the interconnection of networks, using an internal datagram service to determine the shortest time distance to the end connection..  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATIS, ATMS, APTS, CVO  
 STATUS : Approved EST-COMP DATE : Aug 1977

NUMBER : MIL-STD 1778  
 ORGANIZATION : United States Department of Defense

## Communications

ABSTRACT : Transport control protocol provides a connection-oriented data-transfer service between users in order to overcome damage, loss, duplication and misordering of packets during transmission through multiple networks. May be replaced by ISO 8072 and 8073.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, ATIS, APTS, CVO.

STATUS : Approved EST-COMP DATE : Oct 1983

NUMBER : MIL-STD 1780

ORGANIZATION : United States Department of Defense

TITLE : File Transport Protocol

ABSTRACT : File transport protocol is the "upper-layer protocols" that commands the transport control protocol issuing 'service requests' and receiving 'service responses'.

PROJECTED USE: Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO

STATUS : Approved EST-COMP DATE : May 1984

NUMBER : MIL-STD 1781

ORGANIZATION : United States Department of Defense

TITLE : Simple Mail Transfer Protocol

ABSTRACT : an "upper layer protocol" for mail transfer through a network based on transfer control protocol (TCP) and internet protocol (IP).

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO

STATUS : Approved EST-COMP DATE : May 1984

NUMBER : MIL-STD 1782

ORGANIZATION : United States Department of Defense

TITLE : TELNET Protocol

ABSTRACT : TELNET is a virtual circuit switching system (CCITT X.75) similar to Internet.

**Communications**

PROJECTED USE : Communications

SERVICE GROUP : ATMS, ATIS, APTS, CVO

EST-COMP DATE : May 1984

STATUS : Approved

NUMBER : NP15.1

ORGANIZATION : International Standards Organization

TITLE : Physical layer standard (OSI level 1) - roadside to vehicle communication.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG15, Dedicated Short Range Communications for TICS Applications, proposed effort

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO

EST-COMP DATE : 1997

STATUS : Proposed

NUMBER : NP15.2

ORGANIZATION : International Standards Organization

TITLE : Data link layer standard (OSI level 2) - roadside to vehicle communication.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG15, Dedicated Short Range Communications for TICS Applications, proposed effort.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO

EST-COMP DATE : 1997

STATUS : Proposed

NUMBER : NP15.3

ORGANIZATION : International Standards Organization

TITLE : Application layer standard (OSI level 7) - roadside to vehicle communication.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG15, Dedicated Short Range Communications for TICS Applications, proposed effort

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO

EST-COMP DATE : 1997

STATUS : Proposed



### Communications

NUMBER : NP16.1  
 ORGANKATION : International Standards Organization  
 TITLE : Application layer message formats for: Traveler Information, Route Guidance, Fleet Management, Emergency Management.  
 ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG16, Wide Area Communications / Protocols and Interfaces, proposed effort.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATIS, ATMS, APTS, CVO  
 STATUS : Proposed EST-COMP DATE : 1997

NUMBER : NP16.2  
 ORGANKATION : International Standards Organization  
 TITLE : Application message types.  
 ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG16, Wide Area Communications / Protocols and Interfaces, proposed effort  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATIS, ATMS, APTS, CVO  
 STATUS : Proposed EST-COMP DATE : 1997

NUMBER : PW11.2  
 ORGANKATION : International Standards Organization  
 TITLE : Air interface requirements.  
 ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG1 1, Route Guidance and Navigation Systems, proposed effort.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATIS, ATMS, APTS, CVO, Vehicles  
 STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PW15.1  
 ORGANKATION : International Standards Organization  
 TITLE : Identify & review sources of information

### Communications

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG15, Dedicated Short Range Communications for TICS Applications, proposed effort.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, APTS, ATMS, CVO

STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PWI1 5.2

ORGANIZATION : International Standards Organization

TITLE : Survey of application needs.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG15, Dedicated Short Range Communications for TICS Applications, proposed effort.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, APTS, ATMS, CVO

STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PWI15.3

ORGANIZATION : International Standards Organization

TITLE : Communications architectures.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG15, Dedicated Short Range Communications for TICS Applications, proposed effort.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, ATIS, CVO, APTS

STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PWI15.4

ORGANIZATION : International Standards Organization

TITLE : Methodology of standards work program -vehicle to vehicle communication, roadside to vehicle communications.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG15, Dedicated Short Range Communications for TICS Applications, proposed effort.

PROJECTED USE : Communications

### Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO  
 STATUS : Proposed  
 EST-COMP DATE : 1996

NUMBER : PW1 5.5  
 ORGANIZATION : International Standards Organization  
 TITLE : Terminology (in cooperation with WG1).  
 ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG15, Dedicated Short Range Communications for TICS Applications, proposed effort.

PROJECTED USE: Communications  
 SERVICE GROUP : ATIS, ATMS, APTS, CVO  
 STATUS : Proposed  
 EST-COMP DATE : 1996

NUMBER : RBDS  
 ORGANIZATION : National Radio Systems Committee [NRSC] (EIA and NAB)  
 TITLE : United States Radio Broadcast Data System (RBDS) Standard - FM subcarrier data transmission.  
 ABSTRACT : Proposed FM subcarrier signaling for wide area data transfer to vehicles.  
 PROJECTED USE : Traffic Data Communications  
 SERVICE GROUP : ATIS, APTS, others  
 STATUS : Draft  
 EST-COMP DATE : Jan 1995

NUMBER : V.24  
 ORGANIZATION : Consultative Committee for International Telegraph and Telephone  
 TITLE : Functions and electrical characteristics of circuits at the interface between data terminal equipment and data communications equipment.  
 ABSTRACT : Terminal to communications system interface standards.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATIS, ATMS  
 STATUS : Approved  
 EST-COMP DATE : Complete

## Communications

NUMBER : V.28  
 ORGANIZATION : Consultative Committee for International Telegraph and Telephone  
 TITLE : Electrical characteristics for interface circuits.  
 ABSTRACT : Characteristics of electrical circuits used between terminal and communications devices.  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATMS, ATIS, APTS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : v.35  
 ORGANIZATION : Consultative Committee for International Telegraph and Telephone  
 TITLE : Transmission of 48 kilobits/second data using 60 to 108 kiloHertz group bank circuits.  
 ABSTRACT : Transmission of 48 kilobits per second digital data over telephone group circuits with bandwidths of 60 to 108 kiloHertz  
 PROJECTED USE : Communications  
 SERVICE GROUP : ATMS, APTS, ATIS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : VDV 420  
 ORGANIZATION : Verband Deutscher Verkehrsunternehmen  
 TITLE : Technical Requirements for Automatic Vehicle Location/Control Systems - Radio Data Transmission.  
 ABSTRACT : Protocols and message structure for public transit fleet management. Communications between vehicle to/from transit control center. (German Association of Public Transport Operators)  
 PROJECTED USE : Communications, Transit  
 SERVICE GROUP : APTS, ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : x.21  
 ORGANIZATION : Consultative Committee for International Telegraph and Telephone

## Communications

ABSTRACT : Defines the physical characteristics and control procedures for a synchronous digital transmission between the user machine and network. Provides end-to-end digital transmission.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO, Vehicles

STATUS : Approved EST-COMP DATE : Complete

NUMBER : X.25

ORGANIZATION : Consultative Committee for International Telegraph and Telephone

TITLE : Interface Between Data Terminal Equipment (DTE) and Data Circuit-Terminating Equipment (DCE) for Terminals Operating in the Packet Mode on Public Data Networks.

ABSTRACT : Interface protocol standard specifying physical control (layer 1), link control (layer 2) and network control (layer 3) for packet format data transfer connection to a network.

PROJECTED USE : Communications

SERVICE GROUP : ATMS, APTS, ATIS

STATUS : Approved EST-COMP DATE : 1984

NUMBER : x.400

ORGANIZATION : Consultative Committee for International Telegraph and Telephone

TITLE : Message Handling Systems: System Model-Service Elements

ABSTRACT : "Upper Level Protocols" for Message and Mail transfer on networks.

PROJECTED USE : Communications

SERVICE GROUP : ATIS, ATMS, APTS, CVO

STATUS : Approved EST-COMP DATE : 1984

**Computers**

NUMBER : ANSI T1.206-88  
ORGANIZATION : American National Standards Institute  
TITLE : Digital Circuits.  
ABSTRACT : Digital circuit requirements and standards.  
PROJECTED USE : Computers  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : ANSI x3.4  
ORGANIZATION : American National Standards Institute  
TITLE : American National Standard Code for Information Interchange (ASCII).  
ABSTRACT : Computer eight bit code for 256 character set of printing and control characters.  
(See FIPS-1)  
PROJECTED USE : Message transfer  
SERVICE GROUP : ATMS, ATIS, APTS, ARTS, CVO  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-352  
ORGANIZATION : Electronics Industry Association  
TITLE : One-Half-Inch (12.7mm) Magnetic Tape Reel for Computer Use (Requirements for Interchange).  
ABSTRACT :

PROJECTED USE : Computers  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : FIPS 1  
ORGANIZATION : National Bureau of Standards

## Computers

TITLE : Federal Information Processing Standard, American National Standard Code for Information Interchange (ASCII).

ABSTRACT : Computer eight bit code for 256 character set of printing and control characters. (See ANSI X3.4)

PROJECTED USE : Message transfer

SERVICE GROUP : ATMS, ATIS, APTS, ARTS, CVO

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 1000-1 987

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Standard 8-Bit Backplane Interface.

ABSTRACT :

PROJECTED USE : Computers

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 1014-1 987

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Standard for a Versatile Backplane Bus: VME Bus.

ABSTRACT :

PROJECTED USE : Computers

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 1096-1 988

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Standard for a Multiplexed High-Performance Bus Structure.

## Computers

PROJECTED USE : Computers

SERVICE GROUP : ATMS

STATUS : Approved

EST-COMP DATE : Complete

NUMBER : IEEE 1101-1987

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Mechanical Core Specifications for Microcomputers

ABSTRACT :

PROJECTED USE : Computers

SERVICE GROUP : ATMS

STATUS : Approved

EST-COMP DATE : Complete

NUMBER : IEEE 1196-I 987

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Simple 32-Bit Backplane Bus: NuBus.

ABSTRACT :

PROJECTED USE : Computers

SERVICE GROUP : ATMS

STATUS : Approved

EST-COMP DATE : Complete

NUMBER : IEEE 1296-1987

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : High Performance Synchronous 32-Bit Bus: MULTIBUS.

ABSTRACT :



**Computers**

PROJECTED USE : Computers

SERVICE GROUP : ATMS

EST-COMP DATE : Complete

STATUS : Approved

NUMBER : IEEE 162-I 963

ORGANKATION : Institute of Electrical and Electronics Engineers

TITLE : Definitions of Terms of Electronic Digital Computers.

ABSTRACT : Terms and definitions for digital computers.

PROJECTED USE : Computers

SERVICE GROUP : ATMS

EST-COMP DATE : Complete

STATUS : Approved

NUMBER : IEEE 166-I 977

ORGANKATION : Institute of Electrical and Electronics Engineers

TITLE : Standard Definitions of Terms of Hybrid Computer Linkage Components.

ABSTRACT : Terms and definitions for hybrid (combined digital and analog) computers.

PROJECTED USE : Computers

SERVICE GROUP : ATMS

EST-COMP DATE : Complete

STATUS : Approved

NUMBER : IEEE 754-I 985

ORGANKATION : Joint ANSI/IEEE

TITLE : IEEE Standard for Binary Floating Point Arithmetic.

ABSTRACT : Floating point binary arithmetic.

PROJECTED USE : Computer

SERVICE GROUP : All

EST-COMP DATE : Complete

STATUS : Approved

NUMBER : IEEE 796-I 983

**Computers**

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Standard Microcomputer System Bus

ABSTRACT :

PROJECTED USE : Computers

SERVICE GROUP : ATMS

STATUS : Approved EST\_COMP DATE : Complete

NUMBER : IEEE 896.1-1987

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Backplane Bus Specification for Multiprocessor Architectures: Futurebus.

ABSTRACT :

PROJECTED USE : Computers

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 959-I 988

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Specifications for an I-C Expansion Bus: SBX Bus.

ABSTRACT :

PROJECTED USE : Computers

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 961-1987

### Computers

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : 8-Bit Microcomputer Bus System: STD Bus.

ABSTRACT :

PROJECTED USE : Computers

SERVICE GROUP : ATMS

STATUS : Approved

EST-COMP DATE : Complete

**Container, Vehicle Id.**

NUMBER : ISO 6346:1984  
ORGANIZATION : International Standards Organization  
TITLE : Freight containers - Coding, identification and marking.  
ABSTRACT : Shipping container standard for marking.  
PROJECTED USE : Vehicle/container identification  
SERVICE GROUP : CVO  
STATUS : Approved EST-COMP DATE : 1984

**Country Codes**

NUMBER: ISO 3166  
ORGANIZATION : International Standards Organization  
TITLE : Country codes.  
ABSTRACT : Digital codes for countries, states and provinces.  
PROJECTED USE : Map country codes  
SERVICE GROUP : ATIS, ATMS, CVO.  
STATUS : Approved EST-COMP DATE : Complete

**Data Communications**

NUMBER : ISO 7498:1990  
ORGANIZATION : International Standards Organization  
TITLE : Information Processing Systems - Open System Interconnect - Basic Reference Model.  
ABSTRACT : ISO OSI model of seven layer data communications model.  
PROJECTED USE : Data Communications  
SERVICE GROUP : ATIS, ATMS, APTS, ARTS, CVO, ETC  
STATUS : Approved EST-COMP DATE : 1990

NUMBER : ISO 8824:1990  
ORGANIZATION : International Standards Organization  
TITLE : Information Processing Systems - Open Systems Interconnection - Specification for Abstract Syntax Notation One (ASN.1).  
ABSTRACT : Abstract Syntax Notation.  
PROJECTED USE : Data Communications  
SERVICE GROUP : ATIS, ATMS.  
STATUS : Approved EST-COMP DATE : 1990

NUMBER : ISO 8825:1990  
ORGANIZATION : International Standards Organization  
TITLE : Information Processing Systems - Open Systems Interconnection - Specification of Basic and Coding Rules for ASN.1.  
ABSTRACT : Abstract Syntax Notation.  
PROJECTED USE : Data Communications  
SERVICE GROUP : ATIS, ATMS.  
STATUS : Approved EST-COMP DATE : 1990

**Data Input**

NUMBER : ANSI X3.17  
ORGANIZATION : American National Standards Institute  
TITLE : Optical Character Recognition Equipment (OCRE).  
ABSTRACT : Optical character recognition characters and equipment.  
PROJECTED USE : Data input  
SERVICE GROUP : ATMS, ATIS  
STATUS : Approved EST-COMP DATE : Complete

**Data Interchange**

NUMBER : EIA RS-422  
ORGANIZATION : Electronics Industry Association  
TITLE : Interface Standards for RS-422 Synchronous Serial Data.  
ABSTRACT : Detailed timing and signal requirements for parallel data transfer.  
PROJECTED USE : Data Interchange  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA RS-423  
ORGANIZATION : Electronics Industry Association  
TITLE : Interface standards for RS-423 synchronous serial data.  
ABSTRACT :

PROJECTED USE : Data Interchange  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA RS-449-1  
ORGANIZATION : Electronics Industry Association  
TITLE : General Purpose 37-Position and 9-Position interface for Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Data Interchange  
ABSTRACT : General purpose 37-position and 9-position interface for data terminal equipment and data circuit-terminating equipment employing serial binary data interchange.  
PROJECTED USE : Data Interchange  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA RS-499-86  
ORGANIZATION : Electronics Industry Association



**Data Interchange**

TITLE : Interface to generic 1A1 key telephone system.

ABSTRACT :

PROJECTED USE : Data interchange

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-363

ORGANIZATION : Electronics Industry Association

TITLE : Standard for Specifying Signal Quality of Transmitting and Receiving Data Processing Terminal Equipment using Serial Data Transmission at the interface with Non- synchronous

ABSTRACT : Standard for specifying signal quality of transmitting and receiving data processing terminal equipment using serial data transmission at the interface with non synchronous data communication equipment.

PROJECTED USE : Data Interchange

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-366-A

ORGANIZATION : Electronics Industry Association

TITLE : Interface Between Data Terminal Equipment and Automatic Calling Equipment for Data Communication.

ABSTRACT :

PROJECTED USE : Data Interchange

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-404-A

**Data Interchange**

ORGANIZATION : Electronics Industry Association  
TITLE : Standard for Start-Stop Quality for Non-Synchronous Data Terminal Equipment.  
ABSTRACT :

PROJECTED USE : Data Interchange  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER: EIA-548  
ORGANIZATION : Electronics Industry Association  
TITLE : Electronic Design Interchange Format (EDIF) Version 200.  
ABSTRACT :

PROJECTED USE : Data Interchange  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-563  
ORGANIZATION : Electronics Industry Association  
TITLE : Standard Baseband (Audio/Video) interface between NTSC Television Receiving Devices and Peripheral Devices.  
ABSTRACT :

PROJECTED USE : Data Interchange  
SERVICE GROUP : ATMS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA-496-A

**Data Interchange**

ORGANIZATION : Joint EIA/TIA  
TITLE : Interface Between Data Circuit-Terminating Equipment (DCE) and the Public Switched Telephone Network (PSTN).

ABSTRACT :

PROJECTED USE : Data Interchange

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA-561

ORGANIZATION : Joint EIA/TIA

TITLE : Simple 8-Position Non-Synchronous Interface Between Data Terminal Equipment and Data Circuit-Terminating Equipment

ABSTRACT : Simple 8-position non-synchronous interface between data terminal equipment and data circuit-terminating equipment employing serial binary data interchange.

PROJECTED USE : Data Interchange

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA-562-89

ORGANIZATION : Joint EIA/TIA

TITLE : Electrical Characteristics for an Unbalanced Digital Interface.

ABSTRACT :

PROJECTED USE : Data Interchange

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA-574

**Data Interchange**

ORGANIZATION : Joint EIA/TIA  
 TITLE : 9-Position Non-Synchronous Interface between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial  
 ABSTRACT : 9 position non-synchronous interface between data terminal equipment and data circuit-terminating equipment employing serial binary data interchange.  
 PROJECTED USE : Data Interchange  
 SERVICE GROUP : ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA/TIA/IS-232-E  
 ORGANIZATION : Joint EIA/TIA  
 TITLE : Interface Between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Data Binary Data;Interchange.  
 ABSTRACT :

PROJECTED USE : Data Interchange  
 SERVICE GROUP : ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : ISO 9735  
 ORGANIZATION : International Standards Organization  
 TITLE : Electronic data interchange for administration, commerce and transportation (EDIFACT).  
 ABSTRACT : Application of EDIFACT syntax.  
 PROJECTED USE : Data interchange  
 SERVICE GROUP : ATIS, ATMS, APTS, CVO, ETC  
 STATUS : Approved EST-COMP DATE : Complete

**Database Queries**

NUMBER : ANSI X3.1 35  
 ORGANIZATION : American National Standards Institute  
 TITLE : Structured Query Language.  
 ABSTRACT : Structured Query Language is a standardized set of commands for accessing and updating databases.  
 PROJECTED USE : Database Queries  
 SERVICE GROUP : ATIS, ATMS, APTS, CVO.  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : FIPS 127  
 ORGANIZATION : National Bureau of Standards  
 TITLE : Federal Information Processing Standard, Structured Query Language.  
 ABSTRACT : Structured Query Language is a standardized set of commands for accessing and updating databases.  
 PROJECTED USE : Database Queries  
 SERVICE GROUP : APTS, ATIS, CVO, others?  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : ISO 9075:1988  
 ORGANIZATION : International Standards Organization  
 TITLE : Structured Query Language.  
 ABSTRACT : Structured Query Language is a standardized set of commands for accessing and updating databases.  
 PROJECTED USE : Database Queries  
 SERVICE GROUP : APTS, ATIS, CVO, others?  
 STATUS : Approved EST-COMP DATE : 1988

**Digital Maps**

NUMBER : CEN GDF  
 ORGANIZATION : Committee for European Normalisation  
 TITLE : Geographic Data File.  
 ABSTRACT : Geographic data file structure and transfer standard for European geographic digital maps.  
 PROJECTED USE : GIS Data Transfer  
 SERVICE GROUP : ATIS, ATMS, APTS, CVO.  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : FIPS 173  
 ORGANIZATION : National Bureau of Standards  
 TITLE : Federal Information Processing Standard, Spatial Data Transfer Standard  
 ABSTRACT : Standard for transferring data from one geographic information system (GIS) to a second GIS. Defines the requirements for a transfer module.  
 PROJECTED USE : GIS Data Transfer  
 SERVICE GROUP : ATIS, ATMS, APTS, CVO, Vehicles  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : NP3.1  
 ORGANIZATION : International Standards Organization  
 TITLE : Geographic Data File  
 ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG3 TICS Database Technology, proposed effort.  
 PROJECTED USE : GIS Data Transfer  
 SERVICE GROUP : All  
 STATUS : Proposed EST-COMP DATE : 1997

NUMBER : NP3.2  
 ORGANIZATION : International Standards Organization  
 TITLE : Physical Storage

**Digital Maps**

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG3  
TICS Database Technology, proposed effort.

PROJECTED USE : Digital Maps

SERVICE GROUP : All

STATUS : Proposed

EST-COMP DATE : 1997

NUMBER : PWI3.1

ORGANIZATION : International Standards Organization

TITLE : Updating Procedure

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG3  
TICS Database Technology, proposed effort.

PROJECTED USE : Digital Maps

SERVICE GROUP : All

STATUS : Proposed

EST-COMP DATE : 1996

**ETTM**

NUMBER : ETTM  
ORGANIZATION : Intelligent Transportation Society - America  
TITLE : Electronic Toll & Traffic Management (ETTM) User Requirements for  
ABSTRACT : Electronic tag requirements, for toll collection and traffic management.  
PROJECTED USE : Electronic toll, traffic mgmt.  
SERVICE GROUP : AVI, ATMS, ETC, CVO, APTS.  
STATUS : Draft EST-COMP DATE : Oct 1995

NUMBER : Exxx-xx  
ORGANIZATION : Joint ASTM/IEEE  
TITLE : Message Set and Protocols for Vehicle to Roadside Communications.  
ABSTRACT : Vehicle to roadside communications protocols, message list and message structure for multi-purpose electronic tolls and traffic management.  
PROJECTED USE : ETTM  
SERVICE GROUP : CVO, ATIS, ATMS, APTS, AVCS, ETC  
STATUS : Proposed EST-COMP DATE : 1995

NUMBER : PWI5.1  
ORGANIZATION : International Standards Organization  
TITLE : FTC Requirements for Technology Standards  
ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WGS, Fee & Toll Collection (FTC), proposed effort.  
PROJECTED USE : ETTM  
SERVICE GROUP : CVO, ATMS, APTS  
STATUS : Proposed EST-COMP DATE : 1996



**Electronic Toll Collection**

NUMBER: PWI5.3  
ORGANIZATION : International Standards Organization  
TITLE : FTC Enforcement  
ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG5, Fee & Toll Collection (FTC), proposed effort.  
PROJECTED USE : Enforcement  
SERVICE GROUP :  
STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PWI5.5  
ORGANIZATION : International Standards Organization  
TITLE : FTC Privacy  
ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG5, Fee & Toll Collection (FTC), proposed effort.  
PROJECTED USE : ETC  
SERVICE GROUP : ATIS, APTS, ATMS, CVO  
STATUS : Proposed EST-COMP DATE : 1996

NUMBER: PW15.6  
ORGANIZATION : International Standards Organization  
TITLE : FTC Security  
ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG5, Fee & Toll Collection (FTC), proposed effort.  
PROJECTED USE : ETC  
SERVICE GROUP : ATIS, APTS, ATMS, CVO  
STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PWI5.7  
ORGANIZATION : International Standards Organization  
TITLE : FTC EDI Aspects

**Electronic Toll Collection**

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG5, Fee & Toll Collection (FTC), proposed effort.

PROJECTED USE : ETC

SERVICE GROUP :

STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PW15.8

ORGANIZATION : International Standards Organization

TITLE : FTC Terminology

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG5, Fee & Toll Collection (FTC), proposed effort.

PROJECTED USE : ETC

SERVICE GROUP : ATIS, APTS, ATMS, CVO

STATUS : proposed EST-COMP DATE : 1996

NUMBER : PW15.9

ORGANIZATION : International Standards Organization

TITLE : FTC Tariffing principles

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WGS, Fee & Toll Collection (FTC), proposed effort.

PROJECTED USE : ETC

SERVICE GROUP :

STATUS : Proposed EST-COMP DATE : 1996

**Equipment Design**

NUMBER : EIA-31 O-C  
ORGANIZATION : Electronics Industry Association  
TITLE : Racks, Panels, and Associated Equipment.  
ABSTRACT :

PROJECTED USE : Miscellaneous

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EIA-336  
ORGANIZATION : Electronics Industry Association  
TITLE : Color Coding for Chassis Wiring.  
ABSTRACT : Standard for wiring color codes inside a chassis.

PROJECTED USE : Miscellaneous

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER: EIA-385  
ORGANIZATION : Electronics Industry Association  
TITLE : Preferred Values  
ABSTRACT :

PROJECTED USE : Miscellaneous

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : WD 1-1983  
ORGANIZATION : National Electrical Manufacturers Association

**Equipment Design**

TITLE : General Requirements for Wiring Devices.

ABSTRACT :

PROJECTED USE : Miscellaneous

SERVICE GROUP : ATMS

STATUS : Approved

EST-COMP DATE : Complete

NUMBER : WD 6-I 983

ORGANIZATION : National Electrical Manufacturers Association

TITLE : Wiring Devices - Dimensional Requirements.

ABSTRACT :

PROJECTED USE : Miscellaneous

SERVICE GROUP : ATMS

STATUS : Approved

EST-COMP DATE : Complete

**Human Factors**

NUMBER:

ORGANIZATION : COMSIS CORP

TITLE : Preliminary Human Factors Guidelines for Crash Avoidance Warning Devices

ABSTRACT : Provides preliminary NHTSA guidelines to cover human factors aspects of in-vehicle crash avoidance devices. Both generic and device specific guidelines.

PROJECTED USE : Human Factors

SERVICE GROUP : Vehicles

STATUS : Draft EST-COMP DATE : 1995

NUMBER : AI-U/ANSI G-035

ORGANIZATION : American Institute of Aeronautics and Astronautics

TITLE : Guide for Human Performance Measurement

ABSTRACT : Methods for measuring human performance for the purpose of scientific research and system evaluation.

PROJECTED USE : Human Factors

SERVICE GROUP : ATMS, Vehicles

STATUS : Approved EST-COMP DATE : Complete

NUMBER : EPRI NP-3657

ORGANIZATION : Electrical Power Research Institute

TITLE : Human Factors Guidelines for Nuclear Power Plant Control Room Development

ABSTRACT : A framework for systematically applying human factors principles and criteria throughout the development of a nuclear power plant control room.

PROJECTED USE : Human Factors

SERVICE GROUP : ATMS

STATUS : Approved EST-COMP DATE : Complete

NUMBER : FAAJASE-100

ORGANIZATION : Volpe Transportation Center

TITLE : Computer Human Interface (CHI) Evaluation Checklist

**Human Factors**

ABSTRACT : Computerized tool for evaluation of computer human interface for air traffic control systems.

PROJECTED USE : Human Factors

SERVICE GROUP : ATMS

STATUS : Draft EST-COMP DATE : UNK

NUMBER : IEEE 1228

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Software Safety Plans

ABSTRACT : Software safety.

PROJECTED USE : Human Factors, Software Safety

SERVICE GROUP : ATIS, ATMS, APTS, CVO, Vehicles

STATUS : Approved EST-COMP DATE : Apr 1994

NUMBER : MIL-STD 1472D

ORGANIZATION : United States Department of Defense

TITLE : Human Engineering Design Criteria for Military Systems, Equipment and Facilities

ABSTRACT : Human engineering design criteria, principles and practices to integrate the human into the system; and achieve effectiveness and safety of operations and maintenance

PROJECTED USE : Human Factors

SERVICE GROUP : ATMS, APTS, ATIS, Vehicles

STATUS : Approved EST-COMP DATE :

NUMBER : PWII 3.1

ORGANIZATION : International Standards Organization

TITLE : Identify and review sources of information.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG13, Human Factors and Man-Machine-Interface (MMI), proposed effort.

PROJECTED USE : Human Factors

SERVICE GROUP : All

**Human Factors**

STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PW1 3.2

ORGANIZATION : International Standards Organization

TITLE : Develop Human Factors TICS bibliograpy.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG13, Human Factors and Man-Machine-Interface (MMI), proposed effort.

PROJECTED USE : Human Factors

SERVICE GROUP : All

STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PW1 3.3

ORGANIZATION : International Standards Organization

TITLE : Define and prioritize standards requirements.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG13, Human Factors and Man-Machine-Interface (MMI), proposed effort.

PROJECTED USE : Human Factors

SERVICE GROUP : All

STATUS : Proposed EST-COMP DATE : 1996

NUMBER : PWII 3.4

ORGANIZATION : International Standards Organization

TITLE : Develop ISO standards proposals.

ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG13, Human Factors and Man-Machine-Interface (MMI), proposed effort.

PROJECTED USE : Human Factors

SERVICE GROUP : All

STATUS : Proposed EST-COMP DATE : 1996

NUMBER : UCRL-15673

**Human Factors**

ORGANIZATION : Lawrence Livermore National Laboratory  
TITLE : Human Factors Design Guidelines for Maintainability of DOE Nuclear Facilities  
ABSTRACT : Guidelines concerned with design features of DOE nuclear facility repair and maintenance activities  
PROJECTED USE : Human Factors  
SERVICE GROUP : ATMS, APTS  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : UMTRI-93-21  
ORGANIZATION : University of Michigan Transportaion Research Institute  
TITLE : Suggested Human Factors Design Guidelines for Driver Information Systems  
ABSTRACT : Guidelines for IVHS-related driver information systems. Describes how to make such systems safe and easy to use. Includes manual controls, spoken input, etc.  
PROJECTED USE : Human Factors  
SERVICE GROUP : Vehicles  
STATUS : Draft EST-COMP DATE : 1995



**Interface**

NUMBER : ANSI TI.401-88  
ORGANIZATION : American National Standards Institute  
TITLE : Interfaces to analog switched access.  
ABSTRACT :

PROJECTED USE : Interface

SERVICE GROUP : ATMS

STATUS : Approved

EST-COMP DATE : Complete

NUMBER : ANSI TI.407-90  
ORGANIZATION : American National Standards Institute  
TITLE : Interfaces, analog special access.  
ABSTRACT :

PROJECTED USE : Interface

SERVICE GROUP : ATMS

STATUS : Approved

EST-COMP DATE : Complete

NUMBER : IEEE 696-I 983  
ORGANIZATION : Institute of Electrical and Electronics Engineers  
TITLE : Standard 696 Interface Device.  
ABSTRACT :

PROJECTED USE : Interface

SERVICE GROUP : ATMS

STATUS : Approved

EST-COMP DATE : Complete

**Interface**

NUMBER : IEEE 949  
ORGANIZATION : Institute of Electrical and Electronics Engineers  
TITLE : Trial-Use Standard for Media Independent Information Transfer.  
ABSTRACT : Draft Standard for media independent interface information transfer.  
PROJECTED USE : Interface  
SERVICE GROUP : ATMS  
STATUS : Draft EST-COMP DATE : Unknown

**Multimodal Freight**

NUMBER : ISO 10374:1991  
ORGANIZATION : International Standards Organization  
TITLE : Freight Containers - Automatic Identification.  
ABSTRACT : Shipping container identification system.  
PROJECTED USE : Multimodal Freight, AVI  
SERVICE GROUP : CVO.  
STATUS : Approved EST-COMP DATE : Complete

**Navigation**

NUMBER :

ORGANIZATION : Society of Automotive Engineers

TITLE : Recommended Practice for Location Reference System.

ABSTRACT : Recommended practice for a Geodetic location reference system for spatial data transfer between different digital map databases.

PROJECTED USE : Navigation

SERVICE GROUP : ATIS, APTS, CVO, Vehicles

STATUS : Proposed EST-COMP DATE : Dec 1995

NUMBER :

ORGANIZATION : Society of Automotive Engineers

TITLE : Recommended Practice for Navigation Message Set.

ABSTRACT : Recommended practice defining a message set for navigation. The navigation message set is to be a proper subset of the ITIIS message set.

PROJECTED USE : Vehicles, Emergency

SERVICE GROUP : ATIS, APTS, CVO, Vehicles

STATUS : Draft EST-COMP DATE : Sep 1995

NUMBER : DANA

ORGANIZATION : Oak Ridge National Laboratory

TITLE : IVHS Location Referencing System: Dynamic Assignment of Network Attributes Specification.

ABSTRACT : Draft Version B of a proposed Intelligent Transportation System (ITS) Location Reference System.

PROJECTED USE : Navigation

SERVICE GROUP : ATMS, ATIS, APTS, CVO, ARTS

STATUS : Draft EST-COMP DATE : Unknown

NUMBER : IEEE 172-I 983

ORGANIZATION : Institute of Electrical and Electronics Engineers

TITLE : Standard Definitions of Navigation Aid Terms.

**Navigation**

ABSTRACT : Standard terms and definitions for navigation aids.  
 PROJECTED USE : Navigation  
 SERVICE GROUP : ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : IEEE 173-I 959  
 ORGANIZATION : Institute of Electrical and Electronics Engineers  
 TITLE : Navigation Aids.  
 ABSTRACT : Direction finder measurements.  
 PROJECTED USE : Navigation  
 SERVICE GROUP : ATMS  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER: J1663  
 ORGANIZATION : Society of Automotive Engineers  
 TITLE : Truth-In-Labeling Standard for Digital Map Databases  
 ABSTRACT : Truth in labeling standard for map databases for private vehicles. Provides criteria for labeling contents of map database.  
 PROJECTED USE : Navigation  
 SERVICE GROUP : ATIS, APTS, ATMS, vehicles  
 STATUS : Draft EST-COMP DATE : Dec 1995

NUMBER : NAD 27  
 ORGANIZATION : United States Geodetic Service  
 TITLE : North American Datum - 1927.  
 ABSTRACT : Geodetic datum for the North American Continent per 1927. Most US maps are based on NAD 27 geodetic constants.  
 PROJECTED USE : Navigation  
 SERVICE GROUP : ATMS, ATIS, APTS, CVO, Vehicles.  
 STATUS : Approved EST-COMP DATE : Complete

**Navigation**

NUMBER : NAD 83  
 ORGANIZATION : United States Geodetic Service  
 TITLE : North American Datum - 1983.  
 ABSTRACT : Geodetic datum for the North American Continent per 1983. Some US maps are based on NAD 83 geodetic constants.  
 PROJECTED USE : Navigation  
 SERVICE GROUP : ATMS, ATIS, APTS, CVO, Vehicles.  
 STATUS : Approved EST-COMP DATE : Complete

NUMBER : NP11.1  
 ORGANIZATION : International Standards Organization  
 TITLE : Position location performance test.  
 ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WG1 1, Route Guidance and Navigation Systems, proposed effort.  
 PROJECTED USE : Navigation  
 SERVICE GROUP : ATIS, ATMS, APTS, CVO, Vehicles  
 STATUS : Proposed EST-COMP DATE : 1997

NUMBER: NPI 1.2  
 ORGANIZATION : International Standards Organization  
 TITLE : GPS Sensor interface for in-vehicle navigation system.  
 ABSTRACT : ISO Technical Committee TC204, Traffic Information and Control Systems, WGI I, Route Guidance and Navigation Systems, proposed effort.  
 PROJECTED USE : Navigation  
 SERVICE GROUP : Vehicles  
 STATUS : Proposed EST-COMP DATE : 1997

NUMBER : NP11.3  
 ORGANIZATION : International Standards Organization  
 TITLE : Non-GPS navigation system sensor interfaces.

### Navigation

**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WGI I, Route Guidance and Navigation Systems, proposed effort.

**PROJECTED USE :** Navigation

**SERVICE GROUP :** Vehicles

**STATUS :** Proposed **EST-COMP DATE : 1997**

**NUMBER :** NPI 1.4

**ORGANIZATION :** International Standards Organization

**TITLE :** Route guidance information interface to MMI.

**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WGI I, Route Guidance and Navigation Systems, proposed effort.

**PROJECTED USE :** Navigation

**SERVICE GROUP :** Vehicles

**STATUS :** Proposed **EST-COMP DATE : 1997**

**NUMBER:** NPI 1.5

**ORGANIZATION :** International Standards Organization

**TITLE :** Communicaions interface CPU

**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WGI I, Route Guidance and Navigation Systems, proposed effort.

**PROJECTED USE:** Navigation

**SERVICE GROUP :** Vehicles

**STATUS :** Proposed **EST-COMP DATE : 1997**

**NUMBER:** NP3.3

**ORGANIZATION :** International Standards Organization

**TITLE :** Referencing Procedure

**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WG3 TICS Database Technology, proposed effort.

**PROJECTED USE :** Navigation

**SERVICE GROUP :** All

**Navigation**

**STATUS :** Proposed **EST-COMP DATE : 1997**

**NUMBER :** PW111.1

**ORGANIZATION :** International Standards Organization

**TITLE :** Map database requirements

**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WGI I, Route Guidance and Navigation Systems, proposed effort.

**PROJECTED USE :** Navigation

**SERVICE GROUP :** ATIS, ATMS, APTS, CVO, Vehicles

**STATUS :** Proposed **EST-COMP DATE : 1996**

**NUMBER :** RTCM SC1 04

**ORGANIZATION :** Radio Technical Commission for Maritime Service

**TITLE :** RTCM Recommended Standard for Differential NAVSTAR GPS Service.

**ABSTRACT :** Data formats and protocol for differential correction signals for GPS. Decreases GPS positioning error from approx 100 m Spherical Error Probable (SEP) (with selective availability) or 16 m SEP (nominal GPS specified accuracy) to 1 - IO m SEP.

**PROJECTED USE :** Navigation

**SERVICE GROUP :** Vehicles

**STATUS :** Approved **EST-COMP DATE : Jan 1994**

**NUMBER :** WGS 84

**ORGANIZATION :** United States Department of Defense

**TITLE :** World Geodetic System - 1984.

**ABSTRACT :** Geodetic constants and datum used with the Global Positioning System (GPS). Constants for transformation to other datums are included.

**PROJECTED USE :** Navigation

**SERVICE GROUP :** ATMS, ATIS, APTS, CVO, Vehicles.

**STATUS :** Approved **EST-COMP DATE : Complete**



### Navigation

### Operating System

**NUMBER :** ANSI/IEEE 1003.1  
**ORGANIZATION :** Institute of Electrical and Electronics Engineers  
**TITLE :** Portable Operating System Interface (POSIX) for Computer Environments  
**ABSTRACT :** Standard for UNIX. Compatible with multiple, different computer hardware systems.  
**PROJECTED USE:** Computer operating system  
**SERVICE GROUP :** ATIS, ATMS, APTS.  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER :** FIPS 151-I  
**ORGANIZATION :** National Bureau of Standards  
**TITLE :** Federal Information Processing Standard, POSIX  
**ABSTRACT :** U.S. Government standard for UNIX operating system.  
**PROJECTED USE :** Computer operating system  
**SERVICE GROUP :** ATMS, ATIS, APTS, ARTS, CVO  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER :** ISO 9945-I  
**ORGANIZATION :** International Standards Organization  
**TITLE :** Portable Operating System Interface (Posix).  
**ABSTRACT :** UNIX operating system for multiple, different hardware.  
**PROJECTED USE :** Computer operating system  
**SERVICE GROUP :** ATIS, ATMS, APTS, CVO.  
**STATUS :** Approved **EST-COMP DATE :** Complete.

**Packet Switching**

**NUMBER:** ISO 3309:1991  
**ORGANIZATION :** International Standards Organization  
**TITLE :** Data Communications - HLDC Procedures - Frame Structure.  
**ABSTRACT :** High level digital data link control - Link protocols.  
**PROJECTED USE :** Packet switching  
**SERVICE GROUP :** ATMS, ATIS, APTS.  
**STATUS :** Approved **EST-COMP DATE :** 1991

**NUMBER:** ISO 4335:1991  
**ORGANIZATION :** International Standards Organization  
**TITLE :** Data Communications - High Level Data Link Control (HLDC) Procedures.  
**ABSTRACT :** HLDC procedures (Link protocols.)  
**PROJECTED USE :** Packet switching  
**SERVICE GROUP :** ATMS, ATIS, APTS.  
**STATUS :** Approved **EST-COMP DATE :** 1991

**NUMBER :** ISO 8208:1990  
**ORGANIZATION :** International Standards Organization  
**TITLE :** Information Technology - Data Communications X.25 Packet Layer Protocol for Data Terminal Equipment.  
**ABSTRACT :** Network protocol for data communications.  
**PROJECTED USE :** Packet Switching  
**SERVICE GROUP :** ATMS, ATIS, APTS.  
**STATUS :** Approved **EST-COMP DATE :** 1990

**Parallel Data Transfer**

**NUMBER :** EIA RS-422  
**ORGANIZATION :** Electronics Industry Association  
**TITLE :** Electrical Characteristics of Balanced Voltage Digital Interface Circuits  
**ABSTRACT :** Standard for parallel data transfer.  
**PROJECTED USE :** Parallel data transfer  
**SERVICE GROUP :** All  
**STATUS :** Approved **EST-COMP DATE :** Complete

**Programming**

**NUMBER :** IEEE 488.1-1987  
**ORGANIZATION :** Institute of Electrical and Electronics Engineers  
**TITLE :** Standard Digital interface for Programmable Instrumentation  
**ABSTRACT :** Interface standard for connecting test equipments to computers.  
**PROJECTED USE :** Programming  
**SERVICE GROUP :** ATMS  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER:** IEEE 488.2-I 987  
**ORGANIZATION :** Institute of Electrical and Electronics Engineers  
**TITLE :** Standard Codes, Formats, Protocols, and Common Commands for Use with IEEE 488.1 Standard Digital Interface for Programmable Instrumentation.  
**ABSTRACT :** Formats, protocols, codes and commands for digital computers to control test equipments.  
**PROJECTED USE :** Programming  
**SERVICE GROUP :** ATMS  
**STATUS :** Approved **EST-COMP DATE :** Complete

## Quality

**NUMBER:** NP2.1  
**ORGANIZATION :** International Standards Organization  
**TITLE :** Levels of Safety & Environmental Criticality  
**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WG2 Quality and Reliability Requirements, proposed effort.  
**PROJECTED USE :** Quality  
**SERVICE GROUP :** All  
**STATUS :** Proposed **EST-COMP DATE : 1997**

**NUMBER :** PWI2.1  
**ORGANIZATION :** International Standards Organization  
**TITLE :** Quality and Reliability Requirements Glossary  
**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WG2 Quality and Reliability Requirements, proposed effort.  
**PROJECTED USE:** Quality  
**SERVICE GROUP :** All  
**STATUS :** Proposed **EST-COMP DATE : 1996**

**NUMBER :** PWI2.2  
**ORGANIZATION :** International Standards Organization  
**TITLE :** Annotated Bibliography  
**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WG2 Quality and Reliability Requirements, proposed effort.  
**PROJECTED USE :** Quality  
**SERVICE GROUP :** All  
**STATUS :** Proposed **EST-COMP DATE : 1996**

**Quality Assurance**

NUMBER : IEEE 9121  
ORGANIZATION : Institute of Electrical and Electronics Engineers  
TITLE : Software Quality Assurance.  
ABSTRACT : Software (computer programs) quality assurance provisions.  
PROJECTED USE : Software quality  
SERVICE GROUP : ATIS, ATMS, APTS, CVO, ARTS.  
STATUS : Approved EST-COMP DATE : Complete

NUMBER : ISO 9000-I  
ORGANIZATION : International Standards Organization  
TITLE : Quality Management and Quality Assurance Standards - Part 1: Guidelines for Selection and Use.

ABSTRACT :

PROJECTED USE : Quality Assurance  
SERVICE GROUP : All  
STATUS : Approved EST-COMP DATE : 1994

NUMBER: ISO 9000.3  
ORGANIZATION : International Standards Organization  
TITLE : ISO 9000 International Standards for Quality Management

ABSTRACT :

PROJECTED USE : Quality Assurance  
SERVICE GROUP : All  
STATUS : Approved EST-COMP DATE : 1994

NUMBER: ISO 9001-94

**Quality Assurance**

**ORGANIZATION :** International Standards Organization

**TITLE :** Quality Systems - Model for Quality Assurance in Design, Development, Production, Installation, and Service.

**ABSTRACT :**

**PROJECTED USE :** Quality Assurance

**SERVICE GROUP :** All

**STATUS :** Approved

**EST-COMP DATE : 1994**

**NUMBER :** ISO 9002-94

**ORGANIZATION :** International Standards Organization

**TITLE :** Quality Systems - Model for Quality Assurance in Production, Installation, and Service

**ABSTRACT :**

**PROJECTED USE :** Quality Assurance

**SERVICE GROUP :** All

**STATUS :** Approved

**EST-COMP DATE : 1994**

**NUMBER:** ISO 9003-94

**ORGANIZATION :** International Standards Organization

**TITLE :** Quality Systems - Model for Quality Assurance in Final Inspection and Test.

**ABSTRACT :**

**PROJECTED USE :** Quality Assurance

**SERVICE GROUP :** All

**STATUS :** Approved

**EST-COMP DATE : 1994**

**NUMBER :** ISO 9004-I



**Quality Assurance**

**ORGANIZATION :** International Standards Organization

**TITLE :** Quality Management and Quality Systems Elements - Part 1: Guidelines

**ABSTRACT :**

**PROJECTED USE :** Quality Assurance

**SERVICE GROUP :** All

**STATUS :** Approved

**EST-COMP DATE : 1994**

**Safety**

**NUMBER :** PW114.2

**ORGANIZATION :** International Standards Organization

**TITLE :** Collision mayday.

**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WG14, Vehicle/Roadway Warning & Control Systems, proposed effort.

**PROJECTED USE :** Safety

**SERVICE GROUP :** Vehicles

**STATUS :** Proposed

**EST-COMP DATE : 1996**

**Security**

**NUMBER :** DOD 5200.28-STD  
**ORGANIZATION :** United States Department of Defense  
**TITLE :** Department of Defense Trusted Computer System Evaluation Criteria (TCSEC)  
**ABSTRACT :** Defines the basic security features of a trusted computer system and the assurance levels required for protecting information. Various levels and complexities of computer security and protection of information are discussed in detail.  
**PROJECTED USE :** Security  
**SERVICE GROUP :** APTS, ATMS, ETC, CVO  
**STATUS :** Approved **EST-COMP DATE :** Dee 1985

**NUMBER :** EIA RS-170  
**ORGANIZATION :** Electronics Industry Association  
**TITLE :** Electrical Performance Standards for Monochrome Television Studio Facilities.  
**ABSTRACT :** Basic standard for black and white 525 line television.  
**PROJECTED USE :** Traffic sensors Security  
**SERVICE GROUP :** ATIS, ATMS.  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER :** EIA-330  
**ORGANIZATION :** Electronics Industry Association  
**TITLE :** Electrical Performance Standards for Closed Circuit Television Camera 525/60 Interlaced 2:l.  
**ABSTRACT :** Basic TV Camera, 525 lines per screen, 60 frames per second, two scans per frame.  
**PROJECTED USE :** Security  
**SERVICE GROUP :** ATMS, APTS  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER :** FIPS 185  
**ORGANIZATION :** National Bureau of Standards  
**TITLE :** Federal Information Processing Standard # 185, Escrowed Encryption Standard

**Security**

**ABSTRACT :** This standard enables law enforcement agencies to conduct "lawfully" authorized electronic surveillance by having access to the encryption key. Mandatory for Federal computer systems, voice, facsimile and computer information transmitted by telephone.

**PROJECTED USE :** Communications, Security

**SERVICE GROUP :** FBI ?

**STATUS :** Approved **EST-COMP DATE :** Feb 1994

**NUMBER:** FIPS 46

**ORGANIZATION :** National Bureau of Standards

**TITLE :** Federal Information Processing Standard, Data Encryption Standard

**ABSTRACT :** Published by NBS for public encryption/security use, available on VLSI chips. Two modes: Key Auto Key (KAK - 64 bit block encryption) and Cipher Text Auto Key (CTAK - 8 bit block encryption). CTAK is much slower, and provides greater protection than KAK.

**PROJECTED USE :** Communications, Privacy

**SERVICE GROUP :** Electronic Funds Transfer

**STATUS :** Approved **EST-COMP DATE :** 1977

**Sensors**

**NUMBER :**

**ORGANIZATION :** Society of Automotive Engineers

**TITLE :** R. P. for On-board Land Vehicle Positioning Device Interface.

**ABSTRACT :** Recommended Practice for Interface requirements, messages, and protocols for position device (e.g., GPS receiver) to an in-vehicle navigation computer.

**PROJECTED USE :** Vehicles, Navigation

**SERVICE GROUP :** ATIS, APTS, CVO, Vehicles

**STATUS :** Proposed

**EST-COMP DATE :** Sep 1995

**Serial Data Transfer**

**NUMBER:** EIA RS-232  
**ORGANIZATION :** Electronics Industry Association  
**TITLE :** Interface Between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Data Interchange.  
**ABSTRACT :** Serial Data Transfer  
**PROJECTED USE :** Serial data transfer  
**SERVICE GROUP :** All  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER :** EIA RS-485  
**ORGANIZATION :** Electronics Industry Association  
**TITLE :** Standard for Electrical Characteristics of Generators and Receivers for Use in Balanced Digital Multipoint Systems.  
**ABSTRACT :** Serial data transfer for multipoint/multidrop systems.  
**PROJECTED USE :** Serial data transfer  
**SERVICE GROUP :** ATIS,CVO.  
**STATUS :** Approved **EST-COMP DATE :** April 1983

**'Television****NUMBER :** MPE.G 3**ORGANIZATION :** Motion Pictures Expert Group**TITLE :****ABSTRACT :** A video data coding and compression standard being formed to allow high definition video television and stereo audio to be transmitted over existing 5 MHz bandwidth channels. May reduce standard TV to approx. 64 kHz for transmission over ISDN circuits.**PROJECTED USE :** Television, Monitoring, Security**SERVICE GROUP :** ATMS, APTS**STATUS :** Draft**EST-COMP DATE :** Unknown**NUMBER :** NTSC**ORGANIZATION :** National Television System Committee**TITLE :****ABSTRACT :** U.S. Standard for color television broadcast.**PROJECTED USE:** Color TV**SERVICE GROUP :** ATIS, ATMS, APTS, CVO.**STATUS :** Approved**EST-COMP DATE :** Complete.

**Terminal User Interface**

**NUMBER :** FIPS 158  
**ORGANIZATION :** National Bureau of Standards  
**TITLE :** Federal Information Processing Standard, X-windows.  
**ABSTRACT :** U.S. Government standard for MIT X-windows. X-windows is a terminal based graphics user interface.  
**PROJECTED USE :** Terminal MMI  
**SERVICE GROUP :** ATIS, ATMS, APTS, CVO.  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER :** X-II  
**ORGANIZATION :** Massachusetts Institute of Technology  
**TITLE :** X-Windows, Version 11.  
**ABSTRACT :** Standard for MIT X-windows. X-windows is a terminal based graphics user interface.  
**PROJECTED USE :** Terminal MMI  
**SERVICE GROUP :** APTS, CVO, others?  
**STATUS :** Approved **EST-COMP DATE :** Complete.



**Traffic Control****NUMBER :****ORGANIZATION :** CALTRANS**TITLE :** Advanced Traffic Signal Controller**ABSTRACT :** Specifications for a general purpose control computer designed for complex transportation applications. Includes advanced traffic control software specification.**PROJECTED USE :** Traffic control**SERVICE GROUP :** ATMS**STATUS :** Draft**EST-COMP DATE :** Unknown**NUMBER :****ORGANIZATION :** CALTRANS**TITLE :** Traffic Signal Communication Protocol**ABSTRACT :** Asynchronous communications protocol for model 170 controller.**PROJECTED USE :** Traffic control**SERVICE GROUP :** ATMS**STATUS :** Approved**EST-COMP DATE :** Complete**NUMBER :** CMS**ORGANIZATION :** CALTRANS**TITLE :** Specifications for Changeable Message Sign System.**ABSTRACT :****PROJECTED USE :** Traffic Control, information**SERVICE GROUP :** ATMS, ATIS, APTS**STATUS :** Approved**EST-COMP DATE :** Complete**NUMBER :** ICS I-1990**ORGANIZATION :** National Electrical Manufacturers Association**TITLE :** General Standards for Industrial Control and Systems.

**Traffic Control**

**PROJECTED USE :** Traffic control  
**SERVICE GROUP :** ATMS  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER :** ICS 4-I 983  
**ORGANIZATION :** National Electrical Manufacturers Association  
**TITLE :** Terminal Blocks for Industrial Use.  
**ABSTRACT :**

**PROJECTED USE :** Traffic control  
**SERVICE GROUP :** ATMS  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER:** **ICS 6-I 988**  
**ORGANIZATION :** National Electrical Manufacturers Association  
**TITLE :** Enclosures for Industrial Control and Systems.  
**ABSTRACT :** Enclosure (electronic cabinet) requirements.

**PROJECTED USE :** Traffic control  
**SERVICE GROUP :** ATMS  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER :** ITE ST-01 7  
**ORGANIZATION :** Institute of Transportation Engineers  
**TITLE :** Equipment and Material Standards of the Institute of Transportation Engineers.  
**ABSTRACT :** Covers pre-timed and actuated controllers, cabinets and detectors.

**PROJECTED USE :** Traffic control  
**SERVICE GROUP :** ATMS  
**STATUS :** Approved **EST-COMP DATE :** Complete

**Traffic Control**

NUMBER : Model 170  
**ORGANIZATION :** CALTRANS  
**TITLE :** Traffic Signal Control Equipment Specification.  
**ABSTRACT :** Hardware specifications for Model 170 controller unit and associated program modules, flasher units, switch packs, sensors, modems, cabinets and support assemblies.  
**PROJECTED USE :** Traffic Control  
**SERVICE GROUP :** ATMS  
**STATUS :** Approved **EST-COMP DATE :** Complete

NUMBER : NEMA 0183  
**ORGANIZATION :** National Electrical Manufacturers Association  
**TITLE :** Asynchronous serial data (?)  
**ABSTRACT :**  
  
**PROJECTED USE :** Traffic control  
**SERVICE GROUP :** ATMS  
**STATUS :** Approved **EST-COMP DATE :** Complete

NUMBER : NEMA 250-I 988  
**ORGANIZATION :** National Electrical Manufacturers Association  
**TITLE :** Enclosures for Electronic Equipment.  
**ABSTRACT :** Enclosure (electronic cabinet) requirements.  
**PROJECTED USE :** Traffic control  
**SERVICE GROUP :** ATMS  
**STATUS :** Approved **EST-COMP DATE :** Complete

NUMBER : NP9.1  
**ORGANIZATION :** International Standards Organization

**Traffic Control**

**TITLE :** Internal and external interfaces for traffic information, management and control systems and components.

**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WG9, Integrated Transport Information Management and Control, proposed effort.

**PROJECTED USE :** Traffic Management

**SERVICE GROUP :** ATMS, ATIS

**STATUS :** Proposed **EST-COMP DATE :** 1997

**NUMBER :** NTCIP

**ORGANIZATION :** National Electrical Manufacturers Association

**TITLE :** National Traffic Control / IVHS Communications Protocol (NTCIP).

**ABSTRACT :** Traffic control interface and protocols to sensors, control devices (signals) and traffic management applications.

**PROJECTED USE :** Traffic control

**SERVICE GROUP :** ATMS.

**STATUS :** Draft **EST-COMP DATE :** Unknown

**NUMBER :** PW19.1

**ORGANIZATION :** International Standards Organization

**TITLE :** Define traffic information, management and control systems with respect to concepts functions, etc.

**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WG9, Integrated Transport Information Management and Control, proposed effort.

**PROJECTED USE :** Traffic Management

**SERVICE GROUP :** ATMS, ATIS

**STATUS :** Proposed **EST-COMP DATE :** 1996

**NUMBER :** Series 68

**ORGANIZATION :** New York State DOT

**TITLE :** SPC Series 68 Controller Specification.

**ABSTRACT :**

**Traffic Control****PROJECTED USE :** Traffic Control**SERVICE GROUP :** ATMS**STATUS :** Draft**EST-COMP DATE :** Unknown**NUMBER :** TS-1**ORGANIZATION :** National Electrical Manufacturers Association**TITLE :** Traffic Control Systems**ABSTRACT :** Traffic Control Systems - for solid state actuated traffic signal controllers, detector amplifiers, conflict monitors, backpanels, cabinets, and load switches.**PROJECTED USE :** Traffic control**SERVICE GROUP :** ATMS**STATUS :** Approved**EST-COMP DATE :** Complete**NUMBER :** TS-2**ORGANIZATION :** National Electrical Manufacturers Association**TITLE :** Traffic Control Systems**ABSTRACT :** Traffic Control Systems - for solid state actuated traffic signal controllers (Types 1 and 2), detector amplifiers, conflict monitors, backpanels, cabinets, and load switches.**PROJECTED USE :** Traffic control**SERVICE GROUP :** ATMS**STATUS :** Approved**EST-COMP DATE :** Complete**NUMBER :** Type 179**ORGANIZATION :** New York State DOT**TITLE :** Type 179 Traffic Control Hardware Specifications.**ABSTRACT :****PROJECTED USE :** Traffic Control**SERVICE GROUP :** ATMS

Thursday, December 15, 1994

**Traffic Control**

STATUS :           Approved

EST-COMP DATE : Complete

**Traveler Information****NUMBER :****ORGANIZATION :** Society of Automotive Engineers**TITLE :** ITIIS Data Dictionary**ABSTRACT :** Data dictionary for International Travelers Information Interchange System (ITIIS) message list.**PROJECTED USE :** Traveler Information**SERVICE GROUP :** ATIS**STATUS :** Proposed **EST-COMP DATE :** Dec 1995

## NUMBER:

**ORGANIZATION :** Society of Automotive Engineers**TITLE :** International Traveler Information Interchange System**ABSTRACT :** Application (top) level standard for International Traveler Information Interchange System (ITIIS) traffic data interchange between a traffic management center of traffic information system (TMCITIS) and a driver, traveler, or vehicle.**PROJECTED USE :** TMC, Vehicle, Transit**SERVICE GROUP :** ATIS**STATUS :** Proposed **EST-COMP DATE :** Dec 1995

## NUMBER :

**ORGANIZATION :** Society of Automotive Engineers**TITLE :** R. P. for Traveler Information System (TIS) Data;Dictionary.**ABSTRACT :** Data dictionary for the overall Intelligent transportation System (ITS) traveler information system message list. To be at the bit level detail.**PROJECTED USE :** Traveler Information**SERVICE GROUP :** ATIS, APTS, CVO, ARTS, ATMS, etc**STATUS :** Proposed **EST-COMP DATE :** Dec 1995

**Vehicle Area Network****NUMBER:****ORGANIZATION :** Society of Automotive Engineers**TITLE :** Specification and performance requirements for connectors and wiring on non-drive train Transit applications of SAE J1708**ABSTRACT :** Standardized wiring plan and connector standard for all devices proposed for installation on transit revenue vehicles for universal power and signal wiring.**PROJECTED USE :** Vehicle Area Network, Transit**SERVICE GROUP :** APTS, Vehicles**STATUS :** Draft**EST-COMP DATE : 1996****NUMBER :** CAN**ORGANIZATION :** Bosch/Phillips Components/Intel**TITLE :** Controller Area Network**ABSTRACT :** Proprietary open standard for automotive network. Chips available from Motorola, Intel, etc. Used chiefly in Europe for automobiles and lorries. High cost of application? Also ISO 11898.**PROJECTED USE :** Vehicle Area Network**SERVICE GROUP :** Vehicles**STATUS :** Apprved**EST-COMP DATE : Complete****NUMBER :** EIA IS-60**ORGANIZATION :** Electronics Industry Association**TITLE :** Consumer Electronics Bus (CEBus)**ABSTRACT :** Local/vehicle area network intended for consumer applications. In work for nine years - low demand.**PROJECTED USE :** Vehicle Area Network**SERVICE GROUP :** Vehicles**STATUS :** Draft**EST-COMP DATE : Unknown****NUMBER:** ISO 11898**ORGANIZATION :** International Standards Organization



### Vehicle Area Network

**TITLE :** Controller Area Network (CAN)

**ABSTRACT :** ISO version of the Bosch developed Controller Area Network (CAN) in-vehicle **area** network for automobiles and lorries. Supported by a number of European manufacturers.

**PROJECTED USE :** Vehicle Area Network

**SERVICE GROUP :** Vehicles, APTS

**STATUS :** Approved **EST-COMP DATE : Complete**

**NUMBER :** **J1213**

**ORGANIZATION :** Society of Automotive Engineers

**TITLE :** Glossary of vehicle networks for multiplexing and data communications.

**ABSTRACT :**

**PROJECTED USE :** Vehicle Area Network

**SERVICE GROUP :** Vehicles

**STATUS :** Approved **EST-COMP DATE : Complete**

**NUMBER:** J1455

**ORGANIZATION :** Society of Automotive Engineers

**TITLE :** Joint SAE/TMC Recommended Enviornmental Practices **for Electronic Equipment Design of Heavy Duty Trucks and Busses**

**ABSTRACT :** Design Goals for climatic, mechanical, chemical, electrical and **dynamic conditions** found on, and generated by, heavy duty trucks and buses.

**PROJECTED USE :** Vehicle Area Network

**SERVICE GROUP :** APTS, CVO, Vehicles

**STATUS :** Approved **EST-COMP DATE : Complete**

**NUMBER:** J1699

**ORGANIZATION :** Society of Automotive Engineers

**TITLE :** J1850 verification test procedures

**ABSTRACT :**

**Vehicle Area Network**

PROJECTED USE : Vehicle Area Network

SERVICE GROUP : Vehicles

STATUS : Approved EST-COMP DATE : Complete

NUMBER : J1708

ORGANIZATION : Society of Automotive Engineers

TITLE : Truck and Bus Practice. Serial Data Communications between Microcomputer Systems in Heavy Duty Vehicle Applications.

ABSTRACT : Serial Data Communications Between Microcomputer Systems in Heavy Duty Vehicle Applications. Details the hardware interface and outlines the communications protocol.

PROJECTED USE : Vehicle area network

SERVICE GROUP : APTS, CVO

STATUS : Approved EST-COMP DATE : Complete

NUMBER: J1850

ORGANIZATION : Society of Automotive Engineers

TITLE : Class B Communication Network Interface.

ABSTRACT : Vehicle local area network. Each automobile manufacturer builds different versions.

PROJECTED USE : Vehicle area network

SERVICE'GROUP :

STATUS : Approved EST-COMP DATE : Complete

NUMBER: J2178/1

ORGANIZATION : Society of Automotive Engineers

TITLE : Class B Data Communications Network Messages

ABSTRACT : Describes actual messages transmitted over a J1850 vehicles area network.

PROJECTED USE : Vehicle Area Network

SERVICE GROUP : Vehicles

STATUS : Approved EST-COMP DATE : Complete

**Vehicle Data Interface**

**NUMBER :** J1587  
**ORGANIZATION :** Society of Automotive Engineers  
**TITLE :** Joint SAE/TMC R. P. for Electronic Data Interchange Between Microcomputer Systems in Heavy Duty Vehicle Applications.  
**ABSTRACT :** Recommended practice defining on-board vehicle information interchange messages and formats. Developed for heavy vehicles.  
**PROJECTED USE :** Vehicles  
**SERVICE GROUP :** CVO.  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER :** **JI922**  
**ORGANIZATION :** Society of Automotive Engineers  
**TITLE :** Power-train Control Interface for Electronic Controls;Used in Medium and Heavy Duty Diesel on Highway Vehicle Applications.  
**ABSTRACT :** Vehicle information interchange.  
**PROJECTED USE :** Vehicle data transfer  
**SERVICE GROUP :** CVO.  
**STATUS :** Approved **EST-COMP DATE :** Complete

**Vehicle Identification**

**NUMBER:** ISO 3779  
**ORGANIZATION :** International Standards Organization  
**TITLE :** Standard Vehicle Identification Numbering (VIN) System.  
**ABSTRACT :** Numbering system requirements for Vehicle Identification Numbering (VIN).  
**PROJECTED USE :** Vehicle Identification Number  
**SERVICE GROUP :** ATMS, CVO, APTS, ETC.  
**STATUS :** Approved **EST-COMP DATE :** Complete

**NUMBER:** PW15.2  
**ORGANIZATION :** International Standards Organization  
**TITLE :** FTC Vehicle classification  
**ABSTRACT :** ISO Technical Committee TC204, Traffic Information and Control Systems, WG5, Fee & Toll Collection (FTC), proposed effort.  
**PROJECTED USE :** Vehicle Identification  
**SERVICE GROUP :** ATIS, APTS, ATMS, CVO  
**STATUS :** Proposed **EST-COMP DATE :** 1996

### Vehicles

**NUMBER :**

**ORGANIZATION :** Society of Automotive Engineers

**TITLE :** R. P. for In Vehicle Sensor Interface for IVHS Applications.

**ABSTRACT :** Recommended Practice for interface requirements for vehicle sensors, including gyroscopes, compasses, odometer, etc. to an in-vehicle navigation computer.

**PROJECTED USE :** Vehicles.

**SERVICE GROUP :** ATIS, APTS, CVO, Vehicles

**STATUS :** Proposed

**EST-COMP DATE :** Dec 1995

**Weather Data**

**NUMBER:** ITA #2  
**ORGANIZATION :** Consultative Committee for International Telegraph and Telephone  
**TITLE :** International Telecommunications Alphabet #2, weather alphabet.  
**ABSTRACT :** Telecommunications alphabet used to transmit weather symbols and data on a world wide basis.  
**PROJECTED USE :** Weather Data  
**SERVICE GROUP :** ATMS, ATIS.  
**STATUS :** Approved **EST-COMP DATE :** Complete

### Weigh In Motion

**NUMBER:** ASTM E-I 318-90

**ORGANIZATION :** American Society for Test and Measurement

**TITLE :** Standard Specification for Highway Weigh-in-Motion (WIM) Systems with User Requirements and Test Method.

**ABSTRACT :** Highway weigh in motion.

**PROJECTED USE :** Weigh in motion

**SERVICE GROUP :** ATMS. CVO

**STATUS :** Approved EST-COMP DATE : Complete

Publication No. FHWA-JPO-95-005  
HVH-I/3-95(1 M)EW

