

APPENDIX A. REFERENCES

Note: ITS-related references and other information are available on-line via U.S. DOT's **ITS Electronic Document Library [13]**.

1. ***Guide to the Project Management Body of Knowledge***, published by the Project Management Institute [2]. Available at <http://www.pmi.org/publicn/pmboktoc.htm>. *Your first line of defense for terminology and concepts; concise and precise. PMI is a reputable and authoritative organization.*

2. Project Management Institute (PMI)

Four Campus Boulevard
Newtown Square, PA 19073
610-356-4600
<http://www.pmi.org>

PMI conducts monthly meetings throughout the U.S.. Call to find the local chapter near you.

3. ***The Team Handbook*** Second Edition, by Oriel, Inc. (formerly Joiner Associates, Inc.) 1996. ISBN 1-884731-11-2.

3800 Regent St.
Madison WI 53705
800 669-8326

Substantive, practical, and attractively packaged guidance for working in teams. Includes templates and exercises.

4. ***Safeware – System Safety and Computers, A Guide to Preventing Accidents and Losses Caused by Technology***, by Nancy G. Leveson. Addison-Wesley Publishing Company, 1995. ISBN 0-201-11972-2. *The ultimate guide to building safe automated systems. From an author who won an award “For promoting responsible software and system engineering practices where life and property are at stake.”*

5. International Council on Systems Engineering (INCOSE)

2150 N. 107th St., Suite 205
Seattle, WA 98133
800-366-1164

<http://www.incose.org/intro.html>

INCOSE conducts monthly meetings at local chapters throughout U.S. Call to find the local chapter near you.

6. CVISN Project Planning Workshop Notebook.

Workshop sponsored by FMCSA and delivered by JHU/APL. Registration and materials available through [14].

7. ***Early Institutional Lessons from the CVISN Model Deployments: Checklists for Success***, by John A. Volpe National Transportation Systems Center, October 1998. Publication No. FHWA-JPO-99-030. Available through [13] EDL document #7126.

8. ***The Complete Idiot's Guide to Project Management***, by Sunny and Kim Baker. Alpha Books, 1998. ISBN 0-02-861745-2.

9. ***ITS Procurement Resource Guide***, provided by the ITS Joint Program Office [13]. *This is a packaged set that contains [18-20, 22-24], plus brochures on TEA-21 legislation, and a short report from VA DOT on public-private partnership procurement issues.*

10. ***A Guide to Federal-Aid Programs and Projects***, by Federal Highway Administration, Office of Program Administration, May 1999. Publication No. FHWA-IF-99-006. Available through [13] EDL document #9043. *Lists projects, federal funding available, eligibility, and point of contact for each. CVISN is on page 59. Another source for this guide and additional information about the TEA-21 legislation is at <http://www.fhwa.dot.gov/engineering/hng10/covert21.htm>.*

11. ***Software Acquisition Capability Maturity Model***, Version 1.02, April 1999, by the Software Engineering Institute at Carnegie Mellon University. Available free at <http://www.sei.cmu.edu/arm/SA-CMM.html>.

12. ITS Joint Program Office

Federal Highway Administration
U.S. Department of Transportation
400 7th St. SW
Washington, DC 20590
202-366-9536
<http://www.its.dot.gov>

13. ITS Publications and Distribution

ITS Joint Program Office
Federal Highway Administration
U.S. Department of Transportation
400 7th St. SW, HOIT-Rm. 3416
Washington, DC 20590
202-366-0722

ITS Electronic Document Library (EDL)

<http://www.its.dot.gov/welcome.htm>

14. **CVISN Website** hosted by the Johns Hopkins University Applied Physics Laboratory at <http://www.jhuapl.edu/cvisn/>.

15. ***Introduction to ITS/CVO***, training course prepared for FMCSA by JHU/APL. *1-1/2 days. ITS/CVO program's purpose, structure, components, current and future implementation, and technology.* Available through [13] EDL document #8103.
16. ***ITS/CVO Technical Project Management for Non-Technical Managers***, training course prepared for FMCSA by Booz-Allen & Hamilton. *2 days. Skills development for managing the design and implementation of ITS/CVO technology.* Available through [13] EDL document #8063.
17. ***Understanding ITS/CVO Technology Applications***, training course prepared for FMCSA by JHU/APL. *2 days. Overview of CVISN architecture, technology and standards, and how to apply them to ITS/CVO.* Available through [13] EDL document #8143. See also [78].
18. ***The Road to Successful ITS Software Acquisition Executive Summary***. Prepared for FMCSA by Mitretek Systems, July 1998. Available through [13] EDL document #4132. (The Executive Summary is also included in [19].) *A must-read for CVISN project managers.*
19. ***The Road to Successful ITS Software Acquisition, Volume I: Overview and Themes***. Prepared for FMCSA by Mitretek Systems, July 1998. Publication No. FHWA-JPO-98-035. Available through [13] EDL document #4130. *A must-read for CVISN project managers.*
20. ***The Road to Successful ITS Software Acquisition, Volume II: Software Acquisition Process Reference Guide***. Prepared for FMCSA by Mitretek Systems, July 1998. Publication No. FHWA-JPO-98-036. Available through [13] EDL document #4131. *Includes comprehensive list of references. A must-read for CVISN project managers.*
21. ***Key Findings from the Intelligent Transportation Systems Program: What Have We Learned?***. Prepared for FMCSA by Mitretek Systems, September 1996. Publication No. FHWA-JPO-96-0036. Available through [13] EDL document #425. *From early ITS experience. Lessons learned are mostly technical, however "Cross-Cutting Findings" related to methodology and management appear in on page 29 of that document.*
22. ***FHWA Federal-Aid ITS Procurement Regulations and Contracting Options***, by FHWA Turner-Fairbank Highway Research Center, October 1997. Publication No. FHWA-RD-97-145. Available through [13] EDL document #3029. *A must-read for procurement. Lessons learned appear in on page 31 of that document.*
23. ***Innovative Contracting Practices for ITS, Executive Summary***. Prepared for FMCSA by L. S. Gallegos & Associates, Inc, April 1997. Available through [13] EDL document #1868. See [24]. *A must-read for procurement.*
24. ***Innovative Contracting Practices for ITS, Final Report***. Prepared for FMCSA by L. S. Gallegos & Associates, Inc, April 1997. Available through [13] EDL document #2859 (note: 363 pages, requires multiple downloads). *A must-read for procurement. Thoroughly researched and footnoted relative to federal/state legislation and case law; comprehensive and detailed, yet*

readily absorbed. Everything you always wanted to know about ITS contracting. Section II is a primer on federal highway funding. Section III covers types of contracts and methods of award, barriers and solutions for contracting on ITS programs. Appendices have case studies, and extracts of legislation and administrative directives. The lead author, Don Dempsey, can be reached at 970-726-4097 wpdon@rkymtnhi.com.

25. Intelligent Transportation Society of America

400 Virginia Avenue SW, Suite 800

Washington, DC 20024

202-484.4847

<http://www.itsa.org>

ITS America Bookstore

202-484-4548

The mission of the Intelligent Transportation Society of America (ITS America) is to foster public/private partnerships to increase the safety and efficiency of surface transportation through the application of advanced technologies. ITS America was mandated by the U.S. Congress in 1991 to coordinate the development and deployment of intelligent transportation systems in the United States. Sponsors conferences, training courses, and numerous working groups.

26. *Software Development Capability Maturity Model*, Version 1.1 February 1993, by the Software Engineering Institute at Carnegie Mellon University. Available free at <http://www.sei.cmu.edu/cmm/cmm.html>.

27. *Early Institutional Lessons from the CVISN Model Deployments: Checklists for Success*, by John A. Volpe National Transportation Systems Center, October 1998. Publication No. FHWA-JPO-99-030. Available through [13] EDL document #7126. *Five CVISN Pilot States were studied: CA, OR, WA, KY, CT. Results organized into five multi-level “checklists for success”.*

28. *Developing Intelligent Transportation Systems Using the National ITS Architecture – An Executive Edition for Senior Transportation Managers*. Prepared for FMCSA by Mitretek Systems, Inc., July 1998. Available through [13] EDL document #3014. *Includes list of high-level references.*

29. *Developing Traffic Signal Control Systems Using the National ITS Architecture*. Prepared for FMCSA by Mitretek Systems, and TransCore, Inc., February 1998. Publication #FHWA-JPO-98-026. Available through [13] EDL document #3015. *Chapter 4 contains lessons learned and best practices.*

30. *Developing Traveler Information Systems Using the National ITS Architecture*. Prepared for FMCSA by Mitretek Systems, and TransCore, Inc., August 1998. Publication #FHWA-JPO-98-031. Available through [13] EDL document #4163. *Chapter 4 contains lessons learned and best practices.*

31. ***Developing Freeway and Incident Management Systems Using the National ITS Architecture.*** Prepared for FMCSA by Mitretek Systems, and PB Farradyne, Inc., August 1998. Publication #FHWA-JPO-98-032. Available through [13] EDL document #4203. *Chapter 4 contains lessons learned and best practices.*
32. ***ITS Deployment Guidance for Transit Systems Technical Edition.*** Prepared for FMCSA by PB Farradyne, Inc., April 1997. Available through [13] EDL document #4963. *Chapter 5 contains lessons learned and best practices.*
33. ***Successful Approaches to Deploying a Metropolitan Intelligent Transportation System,*** by John A. Volpe National Transportation Systems Center, March 1999. Publication No. FHWA-JPO-99-032. Available through [13] EDL document #8483 or on CD-ROM. *The Executive Summary is a “must read”. Volpe Center staff visited and interviewed four Model Deployment Initiative sites: AZTech (Phoenix), iTravel (NY-NJ-CT), Smart Trek (Seattle), and TransGuide (San Antonio). Nine key “successful approaches” identified; one chapter devoted to each. Report includes handy “deployment aids” -- appendices with actual contract language from which the reader is invited to cut-and-paste; and tables of question-checklists to apply each of the report’s major lessons learned to new projects.*
34. ***Lessons Learned & Success Stories, AZTech ITS Model Deployment Initiative (Phoenix Metropolitan Area).*** April 1999. Available from:
AZTech ITS Model Deployment Initiative
2302 West Durango Street
Phoenix, AZ 85009
602-37-AZTECH
<http://www.aztech.org>
Not only lists thoughtful “lessons learned”, but also contains 20 revealing “success stories” about what went right, such as story #18 which describes their multi-tiered decision-making authorities and 10 cross-jurisdictional product area working groups.
35. ***Proceedings of the Intelligent Transportation Society of America’s Ninth Annual Meeting and Exposition,*** Washington DC, April 19-22, 1999. Available on CD-ROM from [25]. *The CD’s search engine identifies 18 papers with “lessons learned”.*
36. ***Official Microsoft NetMeeting Book,*** by Bob Summers. Microsoft Press, 1998. ISBN 1-57231-816-3.
37. ***The Art of Systems Architecting,*** by Eberhardt Rechtin and Mark W. Maier. CRC Press, 1996. ISBN: 0849378362. *A must-read for the System Architect, especially Rechtin’s “Heuristics for system-level architecting” in Appendix A. Chapter 10 discusses the relationship of politics to system architecting.*
38. ***Systems Engineering Guidebook – A process for Developing Systems and Products,*** by James J. Martin. CRC Press, 1997. ISBN 0-8493-7837-0.

39. ***Essentials of Project and Systems Engineering Management***, by Howard Eisner. John Wiley & Sons, Inc., 1997. ISBN 0-471-14846-6. See “the thirty elements of system engineering” on page 153.
40. ***Software Engineering -- A Practitioner's Approach***, 4th edition, by Roger S. Pressman. McGraw Hill, Inc., 1996. ISBN 0070521824.
41. ***Top Ten Eleven Ways to Manage Technical Risk***, by the Office of the Assistant Secretary of the Navy, 1998. Publication NAVSO P-3686. Available free at <http://www.abm.rda.hq.navy.mil>. *Context is military procurement, but the methods apply generally. Chapter 7 discusses key software measures.*
42. ***Never Confuse a Memo with Reality – and Other Business Lessons Too Simple Not to Know***, by Richard A. Moran. HarperCollins Publishers, Inc., 1993. ISBN 0-88730-669-1. *A concise and inexpensive compilation of tips and aphorisms to put the other references into perspective.*
43. ***Software User Interface Design***, by Deborah J. Mayhew. Prentice-Hall, Inc., 1992. ISBN 0-13-721929-6.
44. ***CVISN Guide to Phase Planning & Tracking***. Prepared for FMCSA by the Johns Hopkins University Applied Physics Laboratory. Available at [14].
45. ***CVISN Toolkit CD-ROM***. Prepared for FMCSA by the Johns Hopkins University Applied Physics Laboratory. May be requested by e-mail at [14]. *A comprehensive set of technical documentation and planning tools assembled on a CD-ROM to assist new CVISN deployment states in the development of their CVISN Project Plans before, during, and after the CVISN Workshops. The documentation on the Tool Kit is linked to the CVISN Web Site for the user to browse and download the latest versions of material.*
46. ***State Fiscal Implications of ITS/CVO Deployment***. Prepared for FMCSA by the National Governors Association, 1998. ISBN 1-55877-299-5. Available through [13] EDL document #5484. *Estimated state savings-to-expenditure ratios for electronic credentialing, and for roadside management, in 8 representative states. Take care to read the whole report – the results are easily misinterpreted. For example, does not account for the FMCSA contribution to state CVISN costs; does not account for safety benefits.*
47. ***A Governor’s Guide to Intelligent Transportation Systems / Commercial Vehicle Operations***. Prepared for FMCSA by the National Governors Association, 1997. ISBN 1-55877-273-5. Available through [13] EDL document #2886. *Historical overview of ITS/CVO; Governor’s role.*
48. ***On-Line ITS Glossary***, by ITS World magazine. <http://www.itsworld.com/ITS101/itsglossary.htm>

49. Reference deleted.

50. ***Information Technology Omnibus Procurement (ITOP) II Handbook***, by Transportation Administrative Service Center. Download from <http://itop.dot.gov/itop/>.

ITOP Special Project Office

Transportation Administrative Service Center

U.S. Department of Transportation

400 7th St. SW

Washington, DC 20590

202-366-9848

A federal multiple-contractor procurement vehicle available to state and local governments. Second-generation contract is called ITOP II.

51. ***The Government Contracts Reference Book – A Comprehensive Guide to the Language of Procurement***, second edition, by Ralph C. Nash, Jr. The George Washington University Law School Government Contracts Program, 1998. ISBN 0-935165-54-1. *Definitions of terms, phrases, and acronyms, in alphabetical format. Context is Federal contracting.*

52. ***Elements of Contract Administration – Practical Advice on Performing Government Contracts***, by Richard D. Lieberman. The George Washington University Law School Government Contracts Program, 1997. ISBN 0-935165-55-X. *Brief overview of the important elements and issues contractors must address when performing Government contracts. Context is Federal contracting.*

53. ***Project Management – A Systems Approach to Planning, Scheduling, and Controlling***, sixth edition, by Harold Kerzner, Ph.D. John Wiley & Sons, Inc., 1998. ISBN 0-471-28835-7. *A mature handbook, broad in scope, for every aspect of project and organizational management; topics are discussed in depth. See his “16 points to project management maturity” page ii. Includes case studies.*

54. **IT Policy On-Ramp Website**, hosted by the General Services Administration Office of Information Technology at <http://www.itpolicy.gsa.gov>.

55. ***A Guide to Planning, Acquiring, and Managing Information Technology Systems***, prepared by the General Services Administration, Office of Governmentwide Policy, December 1998. Available at [54] under “Acquisition”. *IDIQ contract described on page 5-29.*

56. **American Association of Motor Vehicle Administrators Website**, <http://www.aamva.org>.

57. ***Setting Your Course: Reaching Your Destination – A Discussion of Successful Project Management Techniques***. Prepared for AAMVAnet, Inc. by RESI, a research institute of Towson University, Baltimore, MD. Available at [56] under “Publications”.

58. ***Successful Project Management***, third edition, by Milton D. Rosenau, Jr. John Wiley & Sons, Inc., 1998. ISBN 0-471-29304-0. *Emphasizes working within the “triple constraint” of cost, schedule, and technical performance.*
59. ***Department of Defense Handbook – Work Breakdown Structure***, MIL-HDBK-881, published by the U.S.D. Department of Defense, January 2, 1998. Available at <http://www.acq.osd.mil/pm/newpolicy/wbs/wbs.html>. *Everything you ever wanted to know about work breakdown structures. Includes examples from the defense industry.*
60. ***Quality in America – How to Implement a Competitive Quality Program***, by F. Daniel Hunt. Business One Irwin, 1992. ISBN 1-55623-536-4. *Eloquent yet easy-to-grasp thorough overview of the esoteric world of Total Quality Management.*
61. ***Capability Maturity Model for Software***, Version 1.1, February 1993, by the Software Engineering Institute at Carnegie Mellon University. Available free at <http://www.sei.cmu.edu/publications/documents/93.reports/93.tr.024.html>.
62. ***CVISN Guide to Top-Level Design***. Prepared for FMCSA by the Johns Hopkins University Applied Physics Laboratory. Available at [14].
63. ***CVISN Guide to Credentials Administration***. Prepared for FMCSA by the Johns Hopkins University Applied Physics Laboratory. Available at [14].
64. ***CVISN Guide to Safety Information Exchange***. Prepared for FMCSA by the Johns Hopkins University Applied Physics Laboratory. Available at [14].
65. ***CVISN Guide to Electronic Screening***. Prepared for FMCSA by the Johns Hopkins University Applied Physics Laboratory. Available at [14].
66. ***CVISN Guide to Integration and Test***. Prepared for FMCSA by the Johns Hopkins University Applied Physics Laboratory. Available at [14].
67. ***Introductory Guide to CVISN***. Prepared for FMCSA by the Johns Hopkins University Applied Physics Laboratory. Available at [14].
68. ***IEEE Guide to Software Configuration Management***, ANSI/IEEE Std 1042-1987, published by The Institute of Electrical and Electronics Engineers, Inc, 1988. Available for a fee at <http://standards.ieee.org/catalog>.
69. ***ITS/CVO Funding Strategies for States***. Prepared for FMCSA by Cambridge Systematics, Inc., 1998. Available at <http://www.avalon-ais.com/itscvo/>.

70. ***CVISN Operational and Architectural Compatibility Handbook (COACH)***. Prepared for FMCSA by the Johns Hopkins University Applied Physics Laboratory. Available at [14].

Part 1 - Operational Concept and Top-Level Design Checklists, POR-97-7067

Part 2 - Project Management Checklists, POR-97-7067

Part 3 - Detailed System Checklists, POR-97-7067

Part 4 - Interface Specification, POR-97-7067

Part 5 - Interoperability Test Criteria, POR-98-7126

71. ***CVISN Glossary***. Prepared for FMCSA by the Johns Hopkins University Applied Physics Laboratory. Available at [14].

72. ***Use of a Design / Build / Warranty Contract***. Prepared for FHWA by the Michigan Intelligent Transportation System Center, March 2000. Available through [13] EDL document #13460. *Argues that ITS projects are not “construction”. Describes procurement options that are available under Federal-aid regulations for projects that do not meet the definition of construction. See the summary box opposite its Table of Contents.*

73. **COURSE TITLE: Intelligent Transportation Systems (ITS) Procurement**. COURSE NUMBER: 13620. LENGTH: 1 Day (CEU: 0.6 Units). Offered by the National Highway Institute (FHWA). *DESCRIPTION: Deployment of intelligent transportation systems introduces new challenges to State and local transportation agencies that operate under existing procurement policies. Traditional procurement practices were developed to support the design and construction of roads and bridges or to design and construct rail projects. As such, they do not readily accommodate the special needs of ITS procurement which is focused on operations. This seminar is intended to heighten awareness of the challenges in procuring ITS within the traditional construction project environment. It is a companion to, but not a prerequisite for [74].* <http://www.nhi.fhwa.dot.gov/13620.html>

74. **COURSE TITLE: Intelligent Transportation Systems (ITS) Software Acquisition**. COURSE NUMBER: 13619. LENGTH: 2 Days (CEU: 1.2 Units). Offered by the National Highway Institute (FHWA). *DESCRIPTION: This seminar provides a general understanding of the many issues involved in the ITS software development and acquisition processes. It is a companion to [73]. It is focused specifically on ITS software issues.*

<http://www.nhi.fhwa.dot.gov/13619.html>.

Course materials available at: <http://pcb.volpe.dot.gov/materials.asp>.

75. ***IEEE Trial Use Standard for Application and Management of the Systems Engineering Process***. IEEE Std 1220-1998, published by The Institute of Electrical and Electronics Engineers, Inc. Available for a fee at <http://standards.ieee.org/catalog>. *Defines the hierarchical “pieces” of a system as components, assemblies, subsystems, and products.*

76. ***ITS Program Evaluation and Assessment Guidelines***. Available from [12] at <http://www.its.dot.gov/eval/eval.htm>.

77. **National Archives and Records Administration.** Federal laws are available in electronic form at <http://www.nara.gov/fedreg/nfpubs.html>.

78. ***CVISN Scope Workshop Notebook.***

Workshop sponsored by FMCSA and delivered by JHU/APL. Registration and materials available through [14]. *Includes the latest CVISN architecture and standards at the time of the workshop.*

79. ***CVISN and Safety Planning Processes,*** 6-hour workshop developed and delivered by FMCSA. *How to integrate CVISN activities with the statewide and metropolitan planning processes. Also covers the Highway Safety Planning Program such as the State and Community Highway Safety Grant Program (Section 402) and Highway Safety Incentive Grants.* Contact your FMCSA Division Office or Service Center to arrange for the workshop for your state.