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Standard Guide for Archiving and Retrieving Intelligent Transportation Systems-Generated Data[1]

This standard is issued under the fixed designation E 2259; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

INTRODUCTION

This guide has been developed within the framework of developing standards of ASTM International and thus the format, structure, as well as the review, balloting, and approval processes conform to those specified by ASTM International. These processes may differ in their particulars from those used by other standards development organizations associated with developing ITS standards. However, their general intent is the same–that of having a representative group of interested and knowledgeable stakeholders develop standards that can be used by a wide variety of public and private organizations in developing Archived Data Management Systems (ADMS), which can be used to facilitate data sharing and interoperability among systems.

This guide has been prepared with various ITS data stakeholder groups in mind, that is, data users, ADMS policy makers, ADMS developers, and ADMS administrators. To data users and ADMS policy makers, it can provide a general understanding about technical approaches to archiving and retrieving ITS-generated data. For the ADMS developer group, which includes data application software developers, this guide can be a bench-marking reference against which existing ADMS could be further refined or improved with broader perspective. Further, it is also intended to bring greater awareness and consistency in the use and understanding of concepts and use of terminology by the ADMS developers. Finally, the ADMS administrators, whose main function includes collecting, archiving, managing, and distributing ITS data, can find practical guidance and approaches from this guide for effectively operating their ADMS.

It should be noted that there is a subtle distinction in the use of the acronym ADMS throughout this guide. When it is being used in the context of the National ITS Architecture the *S* stands for a *subsystem* of the National ITS Architecture. When the acronym ADMS is being used in the context of an Archived Data Management System in general, or a particular deployment of one, then the *S* stands for *System*. It is also noted that Appendix X1 to this guide presents relationships of the guide to several other activities and standards.

This guide follows the intent of all guides prepared within the ASTM International framework. In particular, it suggests approaches, offers an organized collection of information, or proposes series of options or instructions that give direction without recommending a specific course of action. Guides are also intended to increase awareness of potential users of the standards of the available techniques in the subject area, while at the same time providing information from which subsequent practices can be derived. This document, however, cannot replace a broad-based education or pertinent experience and should be used in conjunction with professional judgment. Not all aspects of this guide may be applicable in all circumstances. This guide is not intended to represent or replace the standard of care by which one judges the adequacy of a given professional service, nor should this document be applied without consideration of the many unique aspects of a project. The word *Standard* in the title of this document means only that the document has been approved through the ASTM International consensus process.

1. Scope

1.1 This guide covers desired approaches to be considered and followed in planning, developing, and operating specific ADMS for the archiving and retrieval of Intelligent Transportation Systems-generated data. The scope of this guide anticipates incremental or modular implementation of an ADMS, which over time and with a series of investment of resources will approach or exceed desired practice. However, it is

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