

# RD&T Technology Facilitation Action Plan

## ATMS Research Analysis Database System (ARADS)

### PRODUCT

**Description of Products :** The objective of this research is to facilitate the sharing of data between various traffic simulation and analysis software programs. This research will develop an FHWA standard data dictionary of terms commonly used by traffic simulations and other analysis programs.

1. Traffic Software Data Dictionary and Traffic Software Object Model (TSDD/TSOM) – The initial ARADS product is a data dictionary and associated software object model. These documents list several hundred common terms and provide definitions for each of them. Where possible, these definitions are references to other, complementary documents, such as the Highway Capacity Manual.
2. ARADS-Compliant Access Database – In order to provide a concrete file format for exchanging ARADS-compliant data, a sample Access database will be built. This database format will be made available to any interested parties.
3. Modifications to TSIS and AASIM – In order to demonstrate the viability of sharing data between different programs, two separate programs will be modified to use the Access database described in (2).
4. Traffic Research Laboratory ARADS Integration Plan – A document describing the data-interchange needs in the TReL and how this can be simplified by using the TSDD/TSOM will be written.

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**Intended User:** Developers of traffic engineering analysis and simulation software  
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**Distribution methods:** The documents and sample database format will be distributed directly to members of the ITE's Traffic Software Developers Task Force. It will also be made available on the TSIS web site.  
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**Alternative Formats:**  
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**Delivery Dates:** September 2000

### PROGRAM/PRODUCT SUPPORT

#### CBU Contact(s):

Operations: Ron Giguere

ITS JPO: Mike Freitas  
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**Resource Center Contact(s):** Steve Clinger, Eastern Resource Center

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**Division Office Contact(s):** Mike Schauer, New York Division  
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**Other Contact(s):**

Scott Shyne, USAF Rome Laboratory  
Dr. Charles Wallace, University of Florida McTrans Center  
Dr. Edmund Chang, Oak Ridge National Laboratory

**OUTREACH**

**Conference Presentations:** Presentations to the ITE's Traffic Software Developers Task Force.  
Presentations to the ATMS Research Technical Advisory Group (RTAG).  
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**Publications:** All final documents for this project will be made available on the TSIS website and on the ITS Electronic Data Library (EDL).  
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**Other Outreach Activities:**

**TRAINING**

**Materials Needed:** No training is planned. Instructions on how to use the TSDD/TSOM will be presented in face-to-face interviews with interested developers.  
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**Instructor Requirements:**  
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**Schedule of Training/Workshop/Briefing:**  
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**Intended Audience:**  
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**Alternative Formats:**  
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**PROGRAM INTEGRATION**

**CBU Contact:**

Operations: Ron Giguere  
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**Research Contact:** Gene McHale, Operations R&D, 202-493-3275  
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**Follow-up Activities:** After making it available to third-party developers, FHWA will "break the ice" by modifying appropriate programs to make use of the ARADS standard. The first candidate for this is the Traffic Software Integrated System (TSIS) software. By publishing a well-defined and standard interface to TSIS, this will encourage other developers to build translators to and from TSIS. Integration of ARADS into the TReL will occur in conjunction with integration into TSIS.

