

ITS Program Strategic Assessment Results FINAL

General Project Information

Project Title	Minnesota Arterial Travel Time (MATT)
Contractor/Contract #	Athey Creek Consultants/91417
Contract Begin - End	10/24/07 - 3/30/09
Total Cost	\$75,345.00
Funding Breakdown	80% federal, 20% state match funds
Partner Contribution	none
ITS Project Manager	Steve Misgen (Metro Traffic Engineer)
Other Interviewees	Contractor Project Manager: Dean Deeter, Athey Creek Consultants Operational Unit Staff: Steve Misgen (Metro Traffic Engineer) ITS contracts & budget contact: Ron Bisek DATTIS Contractor Project Manger: Tom Jensen, Alliant Engineering
Assessor	David Johnson 11/29/11

Project Objectives: (from the final report)

In order to meet the needs identified in Section 2.1, the following goals and objectives were defined for Minnesota Arterial Travel Time reporting initiative:

Goal #1: To develop and reach consensus on definitions for the three classifications of the arterial route performance. The definitions must be based on conditions that are measurable in real-time or by analyzing historic data.

Goal #2: To develop an algorithm to categorize arterial traffic conditions as either 'Free Flowing', 'Minor delays', or 'Moderate to heavy delays', based upon the definitions indicated in Section 2.1.

Goal #3: To develop an algorithm to compute the predicted travel time for an arterial route

Goal #4: That any algorithm developed during the MATT project should be easily transferred to other routes and/or expanded in length. The success of the project would rely on an easily calibrated algorithm, requiring minimal travel time runs and adjustments before operational use.

Did we do the Right Project?

#	Question	Possible	Actual	Normalize
1	Number of Key Mn/DOT Strategic Objectives?	0-4	2,5,1	44%
2	Number of ITS Architecture Development Objectives?	0-5	3,1	40%
3	Fulfill Mandate of Legislature or Mn/DOT Policy?	Yes or No	No	0%
4		narrative		
5	Results still relevant?	Yes or No	Yes	100%
6		narrative		
			Average	46%

Was the Project Done Well?

#	Question	Possible	Actual	Normalize
7	Met original objectives?	Yes or No	Yes	100%
8		narrative		
9		narrative		
10	Completed within original budget?	Yes or No	Yes	100%
11		narrative		
12	Completed within original schedule?	Yes or No	No	0%
13	4 mo. NCTE for coordinating with other projects to share data	narrative		
14	Outreach efforts included?	Yes or No	Yes	100%
	Note: consultant presented at Guidestar Board, ITS America, and Rural ITS Conference			
15	Months from selection to start of work?	<2 - >24	2-6	75%
			Average	75%

Did/Will the Project have the Desired Impact?

#	Question	Possible	Actual	Normalize
16	Continue investigation on to deployment?	Yes or No	Yes	100%
17		narrative		
18	DATTIS (a follow-on project to display real-time arterial travel time) was started but was suspended because of inability to get required volume data from controllers to drive the MATT algorithm.	narrative		
19	Metro traffic and RTMC could use information from successful deployment to manage signal timing and other traffic operations.	narrative		
20	Travelers would benefit from having real-time arterial travel times available.	narrative		
21	Description of potential impacts if deployed?	Yes or No	Yes	100%
22	Besides benefits for agency and travelers (see above) the MATT solution potentially offers a competitive low-cost alternative based on existing controller configurations.	narrative		
23	Benefit/Cost Ratio estimated?	Yes or No	No	0%
24	Describe any known on-going and one-time costs or benefits?			
	Cost comparisons with competing solutions could easily be estimated.	narrative		
25	Other estimates of measurable impacts?	Yes or No	Yes	100%
26	The MATT results offer arterial travel time performance measure definitions and a zero equipment cost and low software cost method of measuring performance.	narrative		
			Average	75%

Check-Off Questions

#	Question	Response
27	Primary Funding Program?	Innovative Idea Program
28	Addressing rural issues, urban issues, or both?	Urban, but could be applied to certain rural situations.

#29. Current/Recent Related Projects

Contract #	Title	Contact	Description	Status
93963	Deployment of Arterial Travel Time Information System (DATTIS)	Steve Misgen	Demonstrate real time display or arterial travel time using MATT algorithm.	Expired 7/31/11
94501	Arterial Travel Time Using Bluetooth	Rashmi Brewer	Demonstrate use of Bluetooth signals to develop real-time arterial travel times.	Completed January 2011
	Developing Performance Measures using GPS Arterial Travel Time	Paul Czech	Use of SPR funds for purchase of GPS data and analysis by TTI	Contract being developed
???	Real Time Arterial Performance Monitoring System (SMART-Signal) Near Southdale	Eric Drager	ITS Institute and Hennepin County Funded. Develop and test a real-time performance measurement system to automatically collect traffic signal data on arterial road networks.	Completed 2009
	Evaluation of Arterial Real-Time Traveler Information Commercial Probe Data	Rashmi Brewer		Active

Narrative Questions

#	Question	Response
30	Barriers to deployment?	The suspension of the DATTIS project has eliminated a clear path forward for deployment of MATT results.
31	Conditions supporting deployment?	The desire by travelers and agency traffic operations staff for arterial travel time. The success of the MATT project in defining arterial travel time performance measures and in developing a practical algorithm to measure arterial travel time.
32	Funding to continue investigation?	If data availability issues uncovered by the DATTIS project can be overcome then programs such as Innovative Ideas or District ITS can be considered for the completion of the DATTIS project.
33	Recommendations to help other projects run better?	

Next Steps

The general direction for any future actions related to the MATT project will be to redirect (or do further) research on the technology or concept. The algorithm developed by MATT for estimating arterial travel times performed well. However, the follow-on DATTIS project was not completed because of difficulty in obtaining the data for the algorithm in real time from the controller environment. Individuals involved in both the MATT and DATTIS projects felt that this line of investigation should continue because:

1. Arterial travel times are in high demand by both traffic operations staff and by travelers.
2. Getting the required data from the controller is not an unsolvable problem.
3. The MATT algorithm approach offers a lower cost solution compared to possible alternatives such as SMART-Signal or purchasing probe data.

Some Possible Future Specific Actions (draft 11/8/11)

	Specific Action	MnDOT Lead
1	<p>Insure that any results and documentation of the DATTIS work completed to date be transferred to MnDOT's knowledge base for future use. This includes:</p> <ul style="list-style-type: none"> a) Messaging recommendations from focus groups and surveys (task #2) b) Java coding of the MATT algorithm (task #3) c) Any evaluation plan documentation that might exist (task #4) d) Recovery of any purchased equipment (task #4) 	
2	<p>Resolve issue of getting the data required for the algorithm from the controller environment. Vendor coordination or support will be required. (Is this another project in itself??)</p>	Misgen
3	<p>Set aside funds to complete the DATTIS project contingent upon resolution of the controller data issue. Much of the original work is complete and the remainder could be completed in 3-4 months according to the consultant. DATTIS was a good project when originally selected for funding and is still a good project.</p> <p>From Ron Bisek: <i>"According to my records, a total of \$69,847.07 was paid on the project. We did not receive any invoices beyond the period ending 12/31/10."</i></p>	Starr
4	<p>Define a MnDOT standard for arterial travel time performance measurement. This would drive deployment of MATT/DATTIS results or another solution. (Has enough work been done on this topic by MATT, DATTIS and other projects to support this?? If not, what remains to be done??)</p>	State Traffic Engineer

5	Follow-on project to MATT to do an updated DATTIS project when information becomes available.	