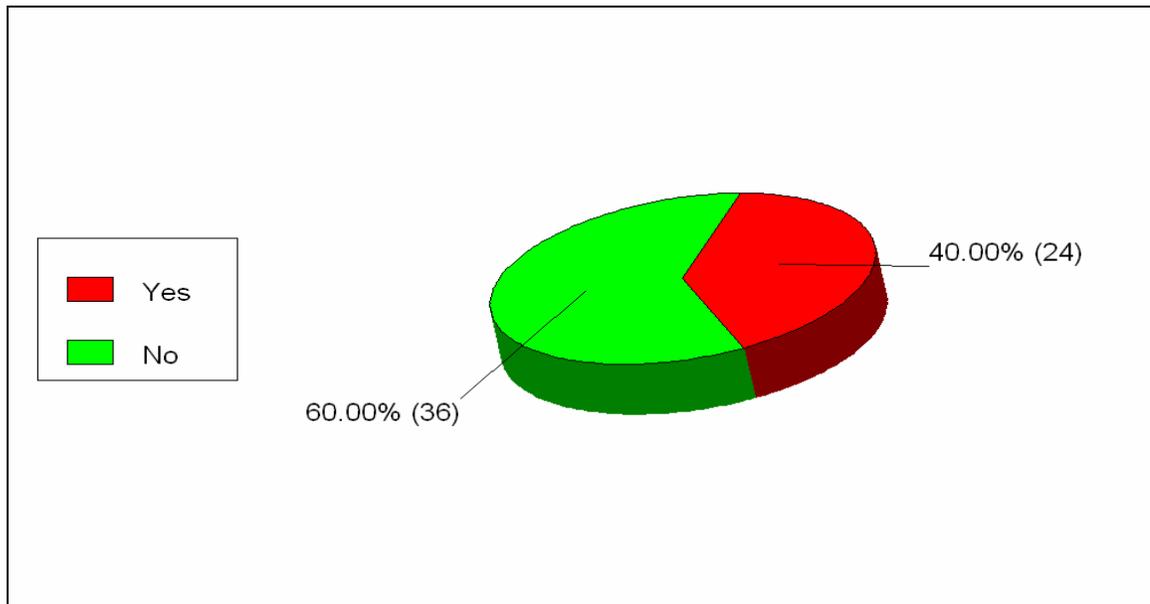


AMPO Survey: Use of Archived Data from Intelligent Transportation Systems

This survey was distributed to all MPOs in May, 2003, and received 60 responses. The unusually low response rate seems to be because many MPOs found the survey irrelevant to their activities.

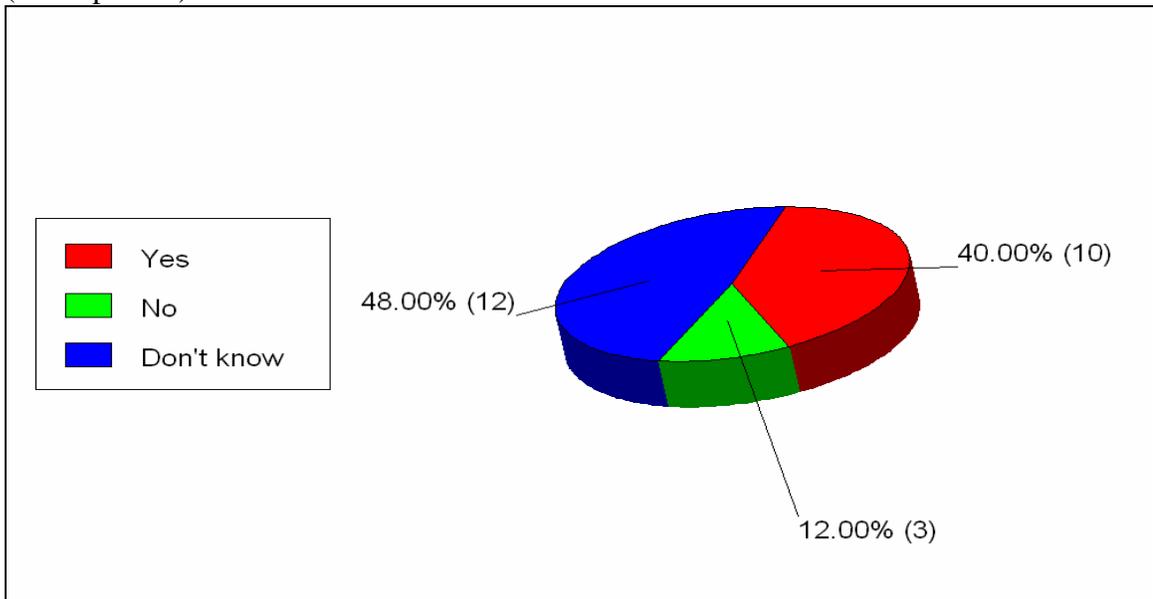
The survey was intended to provide a snapshot of whether, and in what ways, Metropolitan Planning Organizations are using information obtained from Archived Data Management Systems. The results will be used to provide background information for a study by the ITS Joint Program Office of the U.S. Department of Transportation on the uses of archived ITS data.

1. Is there any ITS data archiving taking place in your region? (60 responses)



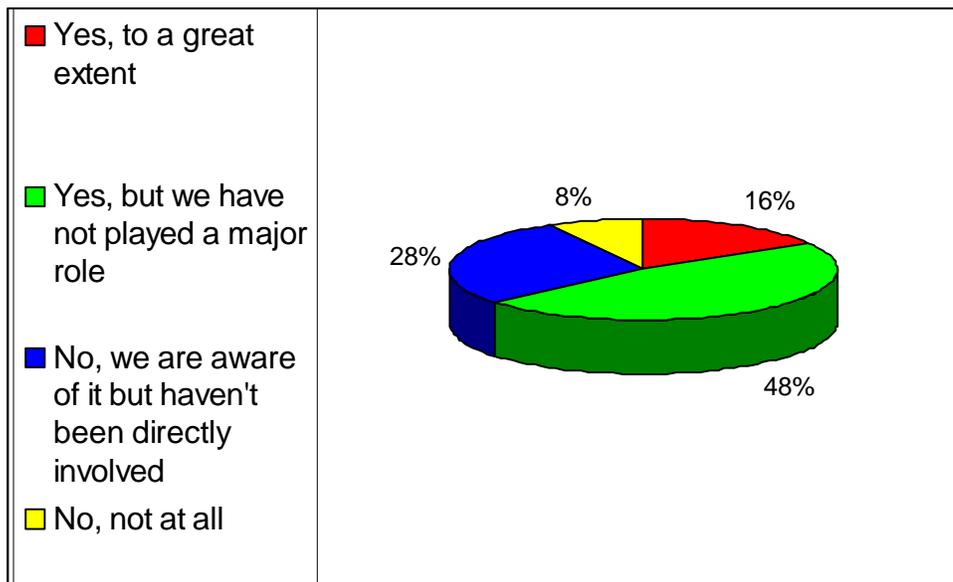
2. Is the archive consistent with the regional or national ITS architecture?

(25 responses)



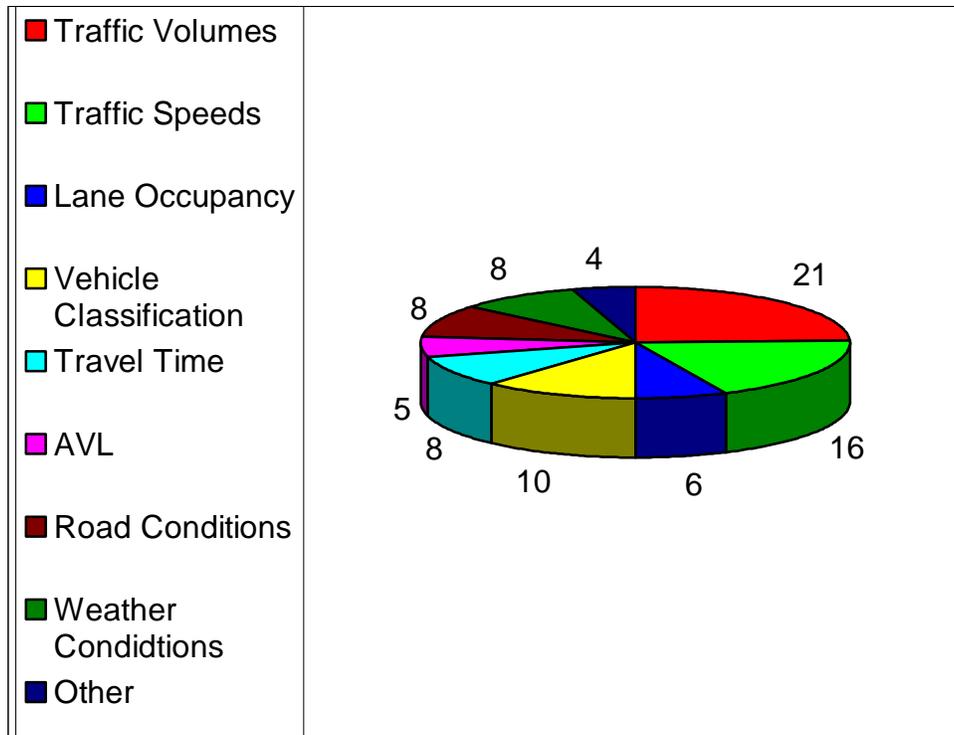
3. Has your MPO been an active participant in the development of ITS data archiving?

(25 responses)



4. What kinds of data are archived in your region?

(86 responses)

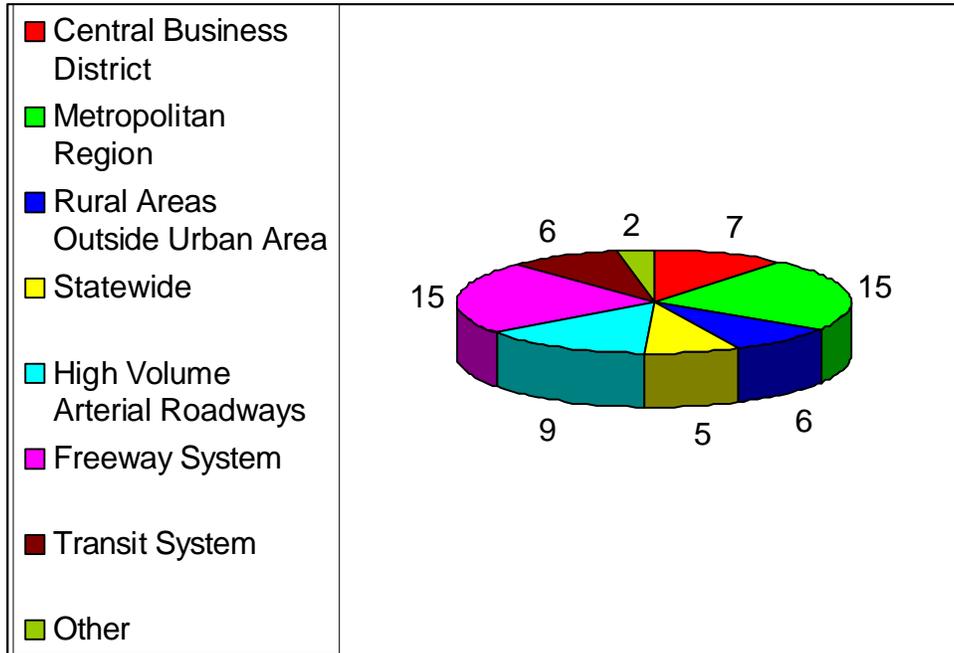


Other:

- ? Accident Reports from Police MDTs; Weigh-In-Motion data, Weigh Station data
- ? Crash data
- ? Transit

5. For which parts of your region/transportation network is ITS data archived?

(65 responses)

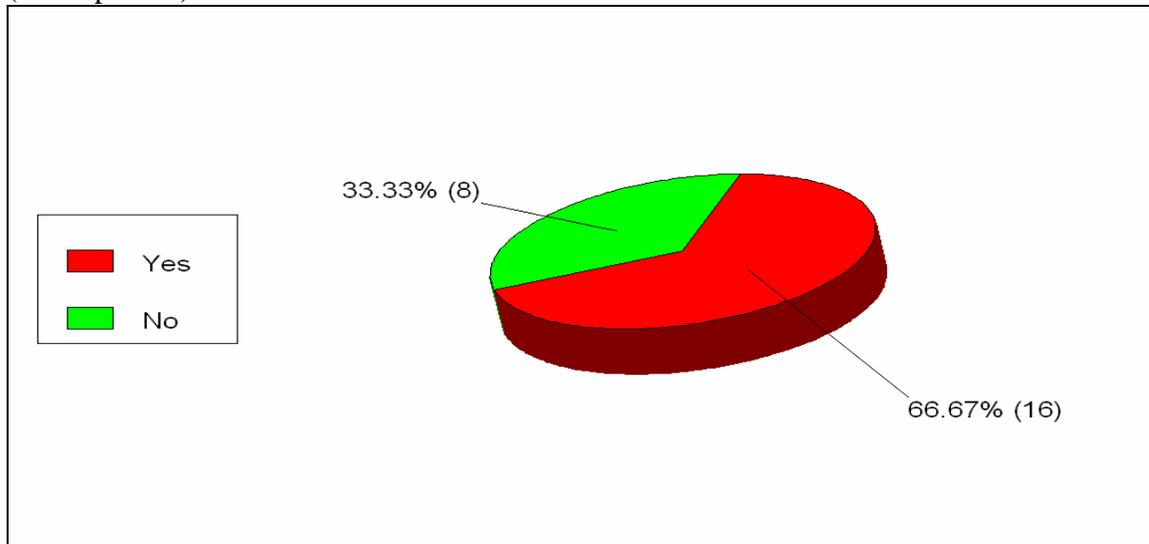


Other:

- ? About 150 miles of arterial roadways
- ? The entire region

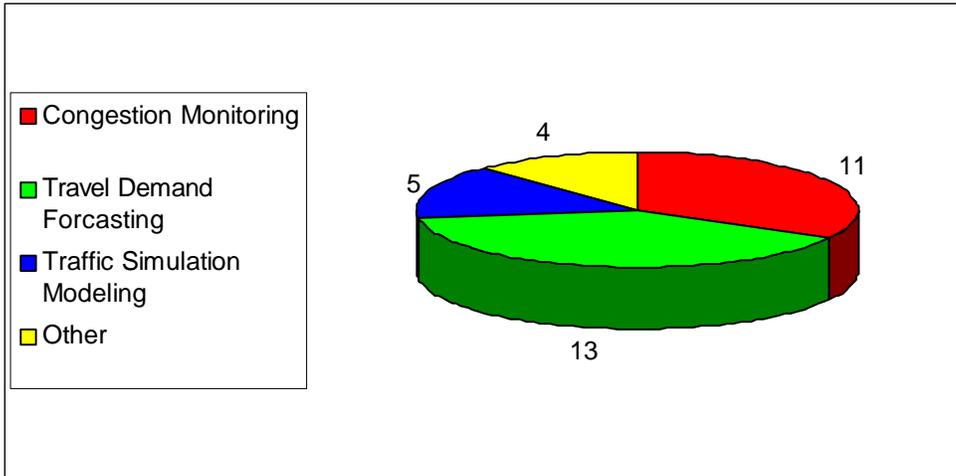
6. Have you used archived data in your planning activities?

(24 responses)



7. In what ways?

(33 responses)

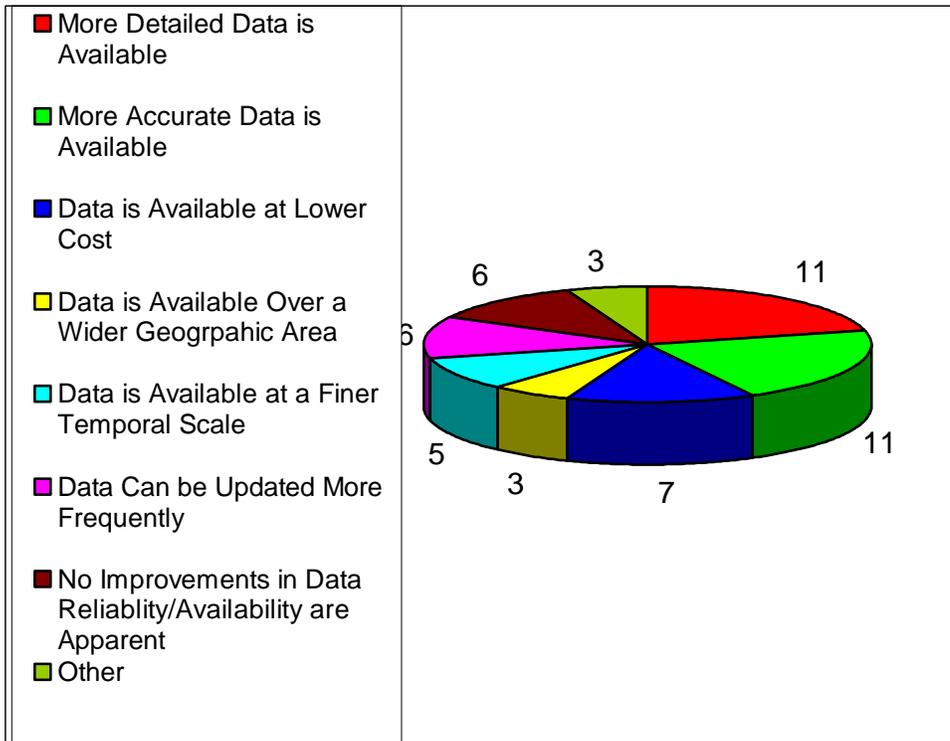


Other:

- a. Competitive grants
- b. Freight study, Air quality modeling MIS input
- c. Transit Study

8. To what extent has archived ITS made a difference in the availability or reliability of data?

(52 responses)

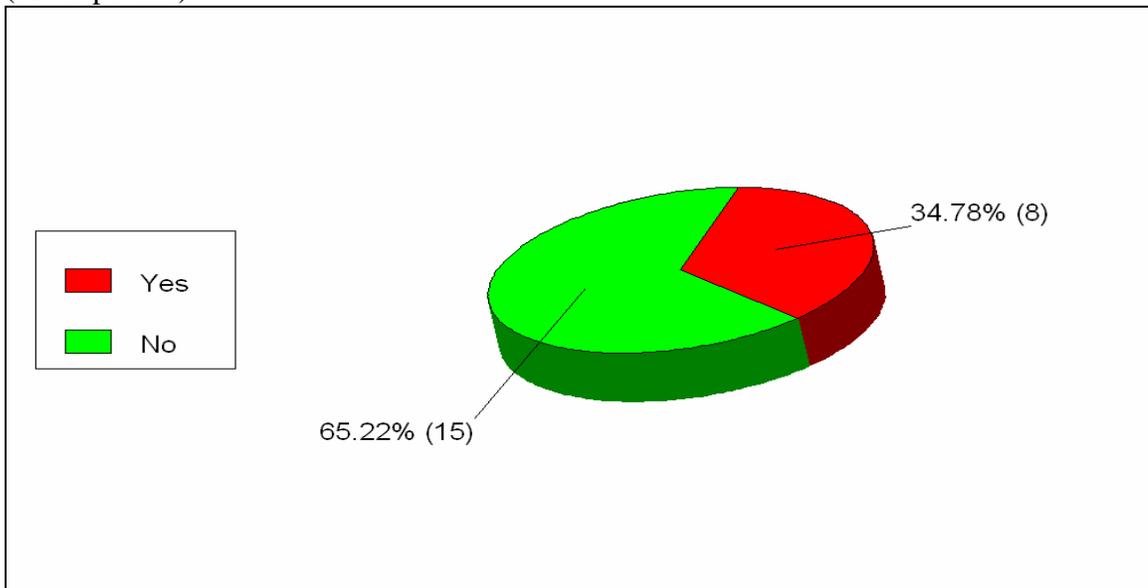


Other:

- ? System is still be developed--just in initial stages of implementations
- ? Too recent to tell
- ? We do not perceive the data we use as an integral part of ITS; just that the data used fits into the ITS definition

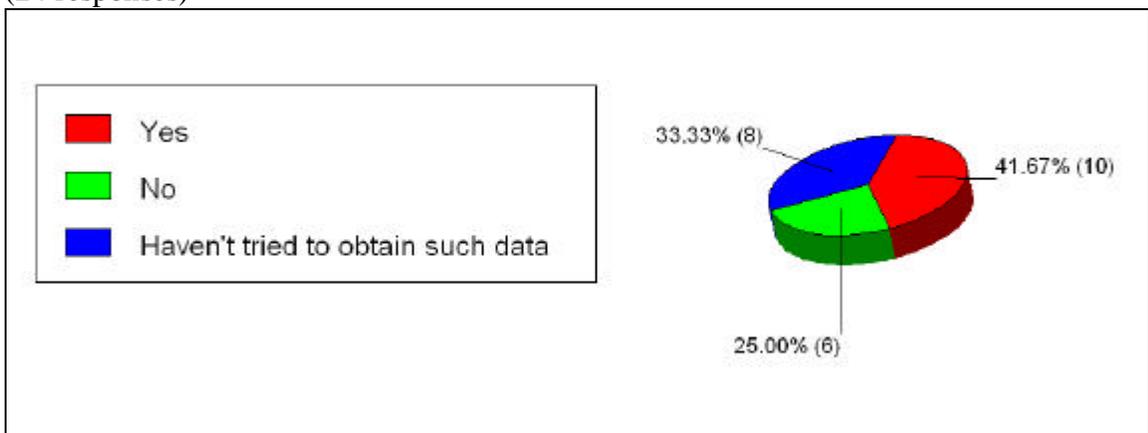
9. Are archived data from ITS and data collected to planning stored in the same database?

(23 responses)



10. Have you found that information from the ITS data archive is easily accessible?

(24 responses)



11. Additional Comments

- ? At this point there is a very limited amount of data archiving occurring and very little actual data is available. However, as the MPO, we did raise this issue in developing our regional ITS architecture during the past year and there have been some informal discussions with the responsible road and transit agencies, and the MDOT, and FTA about this issue, and about attempting to develop some simple pilot data collection/analysis activities as a test bed for future planning applications. One such potential activity, obtaining transit travel speeds using the capabilities of the primary transit agency's Dataguide GPS/automatic location announcement system, has even been listed as a potential future activity in our work program. However, as a practical matter, little work other than discussion of the possibilities has actually occurred. We did also briefly look into getting some data collected using a temporary ITS surveillance system used during closure of a primary Interstate route (I-496) for a large reconstruction project two years ago, without much success. A new centralized traffic control system currently being installed using a federal earmark is also being put into place and will permit collection of a large amount of real time traffic data in the central city. Since the individual responsible for specifying and implementing this new system is also the Chair of our new standing Management and Operations Task Force, some limited discussions have occurred concerning potential future use of archived information from this new system to enhance management and operations/planning activities in selected corridors. Given our small staff size, and other more pressing or conflicting priorities, this activity has been a pretty low priority, although it is at least on our radar screen. A significant issue or barrier, however, is aggregation of the massive volumes of potentially available data into some useable form for planning purposes. For example, in the transit operating speed example above, the on board computer systems of our transit fleet constitute a large wireless distributed network collecting continuous data readings from all buses which actually collect, store for downloading (or can transmit) continuous speed readings onto tape, which could permit archiving of transit travel speeds in quarter-second intervals, generally with an accuracy of plus or minus 5-10 meters (except in certain street canyons, which remain "dark"). Even if archived data were captured, custom software programming by the vendor and/or operator would be required to aggregate the data to something more useful for planning purposes, such as (by way of example) average peak period speeds for 15 minute intervals, by route and roadway facility locations (which are all linearly referenced, so that in theory anyway, speed data, once aggregated) which could be mapped in our GIS and stored for each route from each of the roughly 60-80 active probes (transit buses and demand response vehicles) per day which make up the primary regional bus fleet. The vendor and the operator both have acknowledged the potential, however, they would need to advance the development of the programming necessary to aggregate the data into something more useable to permit this test bed application to occur. The concept of pursuing FTA demonstration project funds to advance this programming and application work went as far as initial discussions with the vendor, operator and FTA officials (who did express interest in the concept), however, MPO staff, the vendor and transit agency staff are all too busy with ongoing activities to even permit preparing the appropriate demonstration grant applications. For operating agencies and MPOs in production modes, pursuing these types of research applications is about the lowest priority on our long to do lists at the present time. One idea that might help is that the JPO could develop a very short and simplified

- demonstration grant application for innovative small research activities such as this (say, in the \$25,000-50,000 range). If a very simplified process was in place to permit MPOs and road/transit agencies to facilitate access to a small research demonstration grant program, MPOs, vendors, operators and road agencies might be more willing to pursue innovative data archiving/planning applications or other ITS innovations if our costs could be covered and if a simplified application process permitted us to advance innovative research ideas without a substantial staff time investment to obtain funding. This approach might facilitate more research by production and implementing agencies if we could assure our management that these activities could be funded and supported without a substantial local investment in staff time and resources just to get the idea off the ground.
- ? Data collection devices are currently being installed on urban area interstates. The Tennessee Dept. of Transportation plans to archive this data. Our MPO has discussed with the DOT that we would like to have access to a summarized version of traffic volumes and speeds, but no formal MOU has been signed at this point. We anticipate using this data for congestion monitoring and to assist with calibration of our travel demand model.
 - ? In Chicago we have archived data for about 40 years. Most of that was on paper though. We have recently moved to digital. We are generating a lot of electronic data, but we have yet to develop a centralized storage system. The MPO and Universities are planning a centralized system. The Regional Transportation Authority will be in charge of Transit Data and IDOT the roadway data. We are also withing the Gary/Chicago/Milwaukee ITS Priority Corridor. This entity also has an archive.
 - ? In some cases I cannot tell how to answer the questions. No we have not used any national ITS data. We do assemble data from the state DOT, local governments, transit agencies and others (that fits into the ITS definition) and use it for various components of the regional planning function. Most of the data assembled in placed with a regional database structure and made available to all staff. In time the data will be made available on the web. However, the data it not organized to necessarily serve "ITS" functions. DRCOG has a long time role of developing and using past, present and future data and has developed databases with this in mind.
 - ? In the Kansas City area the ITS system (KC Scout) is just beginning to go on-line. We do have some automated traffic counters and weather stations running (run by the DOTs) that will feed additional data into KC Scout.
 - ? Most archived ITS data for our region (Thurston County) is gathered by WSDOT for the freeway system. Their Traffic Data Office collects, verifies and reports the data. It is these data reports, not the archived data itself, which we use in our modeling and studies. The Olympic Region WSDOT office, which includes Thurston County, also uses this data for operational analyses, such as traffic simulation.
 - ? Municipality of Anchorage is looking towards making some system changes. We need new signal controllers, companion systems, and connection lines, which will create new opportunities for us to capture ITS data. Alaska Dept. of Transportation & Public Facilities (ADOT&PF) had this to say, " We have lots of archived data. Some would say the traditional traffic data collection program is archived ITS data, just that it is a

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traditional data collection process. " We could probably benefit from clarification of the Archived Data User Service, particularly in relation to traditional data collection. It is confusing, and therefore answering some of the survey questions is difficult.

ADOT&PF Division of Measurement Standards / Commercial Vehicle Enforcement uses some of the WIM and weigh station data for planning purposes, but the responder did not know if the systems archive it, or if they download and save hard copies. What is APC? One more comment: the survey did not directly address public safety / accident data, which would have been good to include.

- ? The state DOT and partnering agencies are in the process of putting together an archival system to be used by all agencies, but it is not operational yet. The direction is to have the information listed above when the system is online.
- ? TxDOT has formulated a Regional Development ITS Plan, with MPO input.
- ? We are beginning the preparation of an ITS plan for Butte County, California. I will be working with the California Department of Transportation (Caltrans) and FHWA.
- ? We are not aware of any current data archiving; however, data collection and archiving from a wireless infrastructure (cameras etc.) is planned. As with all technology issues the exact implementation of this and other initiatives is unknown.
- ? We use PeMS (UC Berkeley) and data at Caltrans HQ, it is basically the same data at two locations. Our modeling group extracts the Caltrans data to make projections. A toll tag reader project will be initiated in a few months, the data will be made available to the PeMS project.