

## **USE OF GIS FOR OPTIMAL MANAGEMENT AND REDUCTION OF AIR POLLUTION LOAD FROM TRANSPORTATION NETWORK IN HYDERABAD**

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Hyderabad city is experiencing rapid growth and transportation issues have assumed critical importance. The present paper highlights an integrated research designed to understand the relationship between Landuse and transportation and presents how transportation related alternatives might be used in the region to accommodate the growth and the demand for travel while holding down the pollution load of transportation. It is observed that the total number of vehicles in Hyderabad increased by 273.9% during 2003 compared to 1987. Total mile of travel (VMT) in the Hyderabad increased by 45% since 1980 to 1997. The analysis showed that the compound growth rate of all vehicles in Hyderabad stands at an average value of 10%. But the relative growth of all vehicles differs widely. The road network of 373 road codes and 1,907 road segments corresponding to an average of about nearly 5 road segments per road code has been established. In order to display street names, a database with road codes and street names was established based on the address database. The spreadsheet with road and traffic data included street width, travel speed and low traffic load of the various categories. The average distribution of traffic performance according to vehicle categories on the road network was calculated for passenger cars, vans, lorries and buses. Finally pollution load from different vehicular strength for each proposed transportation alternative (ring roads, bypass road) are studied.