

# **So what is it that engineers do, anyway?**

or

## **How to answer all those "What are you studying at school?" questions at Thanksgiving dinner...**

by

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Read the passage below and then work with your group to list at least five parts of the Intelligent Highway System. When all groups are finished, someone from each group will have a chance to comment on their group's list.

### **Part 1: The Intelligent Transportation System**

In today's society, traffic accidents and congestion take a heavy toll. Many highway accidents are caused by human error, such as failing to yield the right of way, improper passing, or running stop lights. Additionally, there is heavy traffic congestion in many urban areas, and current patterns of suburban growth and job movement to suburban areas will only lead to more and more traffic problems, both in transit from suburb to city and suburb to suburb travel.

To address these problem, a multi-million-dollar research initiative--the Intelligent Transportation System--is being undertaken by corporations, universities, and federal and state agencies (e.g., the Federal Department of Transportation). One part of this system, the Automated Highway System (AHS), involves automatically controlled cars, specially designed highways, management of traffic flow, automatic alerting of traffic congestion, and in-car computerized navigation systems. For example, the number of cars allowed on any section of highway--and their speed--will be automatically controlled by a central traffic control center, similar to the way planes are controlled by air traffic control centers.

One method for automatically managing traffic flow is the "platoon" concept. In certain areas of the highway, vehicles will be grouped into a multiple car platoon, automatically traveling at high speeds close together. Another idea is to construct special lanes on the highway for use by cars whose steering, speed, and braking systems are automatically controlled to avoid accidents with other cars.

Researchers of this system believe that the AHS will reduce accidents due to driver error and increase the capacity of the highways by allowing more cars to travel at higher speeds, thus reducing traffic congestion.