CNU XVI Networks
Group 3
The Metrics of Networks (Performance Measures)

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Premise: We're victims of what's easy to measure (or model) rather than what's most important

TTI's Urban Mobility index is an example of this. It reports a congestion index (CI) that is essentially vehicle hours of delay and average speed.

Suggestion is to add the following measures and compare with the CI:

- Travel Time
- Lane miles per capita
- VMT per capita
- VMT categorized by Density

Norm Marshall will work on these for Charlotte Summit

Metrics for regional models:

Conventional	**Enhanced Metrics**
Vehicle Hours of Delay Speed Volume/Capacity VMT Volumes of auto trips Transit trips	Mode share (walk, bike, transit, auto) Accessibility measures Lane miles by functional class Connectivity indices (intersections/sq. mi.) Travel time Route Directness
	Enhanced Model More network detail (get credit for the whole grid) Realistic mode share (primary walk and bike trips)

Model enhancements

- Capture land use assumptions at the correct scale to capture walk/bike trip generation in addition to autos
- Capture more travel detail than just primary work trips

Network metrics

- issue of different scales and values
- what's important?

Measures	Auto	Transit	Bike	Walk
Current	Delay V/C Speed	How fast to destination		
Proposed	Predictability of trip travel time Uniformity of travel (slow and steady vs. stop and go)	Does it go where I want to go (coverage) How often (or how long do I have to wait) How safe is it?	How connected What quality of the trip Perception of safety Perception of delay (at crosswalks)	

Express auto metrics in terms that are relevant to other modes