NCITEC Project Information

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Title: Intermodal Optimization for Economically Viable Integration of Surface and Waterborne Freight Transport

Abstract: Currently, U.S. economy is reenergizing its domestic manufacturing infrastructure and continuing sustainable growth in agriculture commodities and other products destined for export. In the US and around the globe the efficient delivery of goods and services is a key factor in economically competitive markets and quality of life. From 1960s-1990s timely capital investments were made in transportation infrastructure (e.g., the U.S. Interstate and national highway systems, freight rail system, airport hubs, ports and inland navigational waterways). This efficient freight transportation network in North America led to a global competitive edge for many decades. These transportation infrastructure systems are aging, not being expanded and modernized at a rate comparable to those of other global competitors. In addition, economic competitiveness is diminishing. These modes operate independently in the U.S. with no operational integration, except some to rail and road intermodal transport terminals. One freight mobility area for economically competitive markets that can benefit tremendously from intermodal integration is the efficient freight transport through seamless connectivity among surface transport (rail for long-haul and road for short-haul trucks), inland waterways, and marine ports.

The overall objectives of this project are to: (1) identify major freight transportation corridors involving shipping ports (marine and inland waterways), highway network, and rail infrastructure assets, (2) model transport demand, visualize routing scenarios, and optimize locations of integrated intermodal terminals, and (3) evaluate the economic competitiveness considering travel time efficiency, safety, disaster resiliency, emissions, and economic development opportunities over 10-20 years planning period. The project will enhance intermodal transportation education by supporting graduate and UG students.

Start Date: January 1, 2014

End Date: December 31, 2015

Project URL (if applicable): http://www.olemiss.edu/projects/cait/ncitec/

Subject Categories (select at least one and at most five categories):

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