

## **Natural fiber composites in transportation applications: Market opportunities and technical challenges**

James D. Holbery  
President  
Grid Mobility LLC  
Kirkland, Washington, USA

Utilization of lightweight natural fibers offers the potential to replace a large segment of the glass and mineral fillers in numerous transportation structures, both internal and external. In the past decade, natural-fiber composites with thermoplastic and thermoset matrices have been embraced by auto manufacturers and suppliers for interior door panels, seat backs, headliners, package trays, dashboards, etc. Natural fibers such as kenaf, hemp, flax, jute, and sisal are providing automobile reinforcement due to such drivers as weight reduction, cost, CO<sub>2</sub> reduction, less reliance on foreign oil sources, recyclability, with the added benefit that these fiber sources are “green” or eco-friendly. However, major challenges remain in order to achieve large-scale automotive insertion. In this talk, the market opportunity and business case are outlined along with the critical technical barriers that exist in order to achieve broad acceptance within the transportation market sector.