Introduction
Micro-Surfacing

Randy Terry
St. Louis, Missouri  September 28, 2006
Midwest Pavement Preservation Partnership
International Slurry Surfacing Association (ISSA)

- Represents Members from Around the World in Slurry Systems (Micro Surfacing & Slurry Seal)
- Established in 1963
- Slurry Systems usage in 36 Countries
Most Recent Event

September 6-8
Beijing International Convention Center

2006 ISSA World Congress
International Seminar on Asphalt Pavement Maintenance Technologies
Global Lead Markets

- United States - 200 million m$^2$
- European Union - 100 million m$^2$
- China - 30 million m$^2$
Notable Global Markets

- Sustained tradition
  - Thailand
  - Canada
  - South Africa

- Potential fast growing markets
  - Russia
  - Brazil
European Union Market

- Total Size ~ 100 million m²
  - France: 40 000 000 m²
  - Spain: about 20 000 000 m²
  - Germany: about 6 000 000 m²
  - Other key countries: UK, Italy,
  - Growth markets: France, Eastern Europe
EU Trends: Micro for High Speed Roads

- Successfully used on German Autobahns for 20 years
- Speeds > 160 km/hr
- Average Daily Traffic > 70,000
- High Axle Weight Trucks

Germany
UNITED STATES Trends:

- Steady growth
- Market shift from Slurry Seal → Micro-Surfacing
- Shift toward night work
- Increased use of continuous production pavers
- Increase awareness with Pavement Preservation Movement
- Growing focus on skid correction / surface friction
Canada

Toronto, Ontario
Thailand

Bangkok Expressway

King Rama IX Bridge
South Africa
Russia

City of Kazan, Tartastan
Brazil

Salvador, Bahia State
MICRO-SURFACING

What is Micro Surfacing?

Polymer-modified cold-mix paving system used for:

- Filling Wheel-Path Rutting
- Restoring and Enhancing Surface Friction
- Minor Correction in Ride-Quality / Roughness
- Sealing and Protecting Existing Asphalt Pavements
- Cost Effectively Extending Pavement Life
- Maintaining Pavements in Good Condition
What is Micro Surfacing?

Cold Paving Mixture Consisting of:
- Polymer Modified Asphalt Emulsion
- Quality Crushed Aggregate
- Mineral Filler (Cement)
- Mix Control Additive
- Mix Water

Laboratory Designed Mixture

A-143 Guidelines
MICRO-SURFACING

What is Micro Surfacing?

Construction Process

Quality Construction
MICRO-SURFACING

What is Micro Surfacing?

Rut-Filling Course

REPROFILING RUTTED WHEELPATHS WITH MICRO-SURFACING

For each inch of applied micro-surface mix add 1/8" to 1/4" crown to each rut fill to compensate for return traffic compaction.

Original Pavement Cross Section

Micro-surfacing Mix

Ruts in Wheelpaths

RUTS 1/2" & OVER MUST USE THE RUT BOX

Rut-Filling Equipment

Construction Site
What is Micro Surfacing?

Rut-Filling or Leveling course.
What is Micro Surfacing?

**Surface Course**

Applications range from 3/16” (15 lbs.) to ½” (40 lbs.) per square yard.

Macro texture and friction properties are determined by aggregate size and finishing technique.

Premium hard aggregates are commonly used to provide long-lasting high friction properties.
What is Micro Surfacing?

Surface Course

High Quality Wearing Surface
MICRO-SURFACING

What is Micro Surfacing?

High Quality Pavement Preservation Treatment
Upcoming Events

Slurry Systems Workshop

2007 AEMA-ARRA-ISSA
Joint Annual Meeting
February 14-17
Bonita Springs, Florida
THANK YOU!

For more information please visit www.slurry.org