



Organized and Hosted by The ITB Group

# 11th Annual Automotive Cockpits Conference

# 2011



Picture Source: Ford Motor Company

**Final Program**  
**October 7, 2011**  
**The Townsend Hotel**  
**Birmingham, Michigan USA**

Sponsored by:

 **BENECKE-KALIKO**

*PolyOne*<sup>™</sup>

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8:00 a.m. -  
9:00 a.m. **Registration and Continental Breakfast**

9:00 a.m. **Welcome and Opening Remarks:  
Future Direction in Automotive Interiors**  
*Ms. Mitra O'Malley, Managing Director  
The ITB Group (U.S.A.)*

## Emerging Technologies

9:30 a.m. **Innovative Vinyl In-Mold 3D Inkjet Printing for Customized Decoration of PVC Slush Skins**  
*Arkema (France)*  
Arkema presents a new innovation for customized decoration through vinyl in-mold 3D inkjet printing. This process is derived from the in-mold painting process (Nakan® SpraySol) suitable for two-tone dashboards. With this new breakthrough technology it is now possible to make fine decoration in a single step that is transferred from the mold to the skin when the slush powder is casted. Latest advances in the field of lightweight PVC slush will also be outlined.

10:00 a.m. **Nickel Vapor Deposition Shell Technology**  
*Weber Manufacturing (Canada)*  
The Nickel Vapor Deposition (NVD) process is used for capturing fine surface detail, such as leather and wood grains, and authentically replicating them into nickel shell tooling used for cast skin, spray PU, ROM and IMG tooling processes will be presented. The accommodation of in-mold graining and vacuum forming processes with NVD nickel shells and full control of vacuum hole placement to create the best situation possible for IMG will be highlighted.

10:30 a.m. **Mid-Morning Break**

11:00 a.m. **High-quality and Functional Decorative Surfaces for the Automotive Cockpit**  
*Benecke-Kaliko (Germany)*  
Alternatives to leather surfaces in cut and sew applications for decorative instrument panel surfaces in premium and medium segment cars will be presented. Material characteristics, processing and performance advantages will be reviewed.

11:30 a.m. **Chrysler Cockpit Development: Process/Focus/Technology**  
*Chrysler (U.S.A.)*  
The presentation will provide an overview of the transformation of the Chrysler process for development of future cockpits and the role of the supply base in the process. The focus will be on highlighting specific milestones in our process and areas of emphasis to exceed customer expectations. Specific references will be made to the supplier's role and areas of technical input from them.

12:00 p.m. **Cockpit and More: New Concepts and Innovations for Material Saving**  
*Krauss-Maffei (U.S.A.)*  
Unique manufacturing solutions for the future vehicle platforms will be discussed. Process techniques will be introduced that provide weight reduction and high dimensional part stability, lightweight composites necessary for electric vehicles, clear coating to significantly reduce production time, technology for in mold paint applications and scratch resistant acrylic parts made in a multicomponent cell will be highlighted.

(continued)

## Conference Sponsors and Exhibitors

### BENECKE-KALIKO

Benecke-Kaliko AG is a world market leader in automotive interior foils. With a global footprint, four manufacturing sites located in Mexico, Germany and China, and with 1,500 employees sales of US\$ 393 million have been generated in 2010. The plant in San Luis Potosí in Mexico works closely together with the sales and development office in Detroit, U.S.A., and can produce up to 13 million m<sup>2</sup> of unsupported and supported expanded vinyl as well as TPO compact and expanded foil for the American market.

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### PolyOne™

PolyOne's coatings solutions offer the luxurious look and haptics of leather for instrument panels, door panels and interior components. We differentiate ourselves through technical competence, quality, speed and innovation. PolyOne's colorants and additives provide the exact look and feel you need. We help you to lower costs, reduce weight, and improve production efficiencies while still maintaining product performance. With over 20,000 specifications and approvals, PolyOne's broad portfolio of thermoplastic material, colorant and additive solutions will help you meet your greatest challenges.

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**12:30 p.m. Lunch**

**1:30 p.m. New Developments in IMG, Thermoforming and Lamination**

*FRIMO (U.S.A)*

The presentation will highlight IMG steel tooling as an alternative to porous nickel, clamp frame developments for difficult product contours and an overview on press lamination processes and tooling.

**3:00 p.m.**

using printed electronic film and haptics technology, and create surfaces that are gloss controlled and utilize grades of film with formable hard coats to improve scratch and UV resistance. The presentation also includes a discussion of a high pressure forming process to prepare the articles for the film insert molding steps in the production process.

**Engineering Challenges of the Decorative / Functional Center Stack**

*Visteon (U.S.A.)*

The center panel in the vehicle has become the integration site for many features and functions leading to conflicting requirements for the technologies being implemented. Trade-offs between electronic functionality, aesthetics, and mechanical interfaces will be discussed along with an introduction to display view-ability determination. The challenge of moving from poke through displays to the integrated touch lens, while meeting display view-ability and homologation requirements with limited solution space will be addressed. New surface treatments and films needed to meet the growing list of requirements making predicting display view-ability an essential part of the optical system design process will also be presented.

## Integrated Center Stacks

**2:00 p.m. Gesture Recognition for the Car HMI**

*Preh (U.S.A.)*

Research about the feasibility of implementing gesture recognition technologies into the car HMI is about to reach maturity. Preh takes a look at possible application scenarios and how gestures could complement traditional buttons, touch-functionality and speech recognition.

**3:30 p.m.**

**Closing Remarks and Afternoon Networking**

**2:30 p.m. New Concepts for Vehicle Integrated Center Stack Design, Material and Process Technology**

*Bayer MaterialScience (U.S.A.)*

New polycarbonate film and process technology provides vehicle designers and engineers additional tools to optimize appearance and function that may be used with printed electronics and other solid state lighting devices. This presentation overviews polycarbonate film grades and other technologies that may be used to create center stacks that diffuse light and integrate black panel technology in screens, enable the implementation of capacitive switches



### Arkema

Arkema consists of three business segments - vinyl products (chlorine - caustic soda, PVC, vinyl compounds and profiles); industrial chemicals (acrylics, specialty acrylic polymers, PMMA and methacrylics, thiochemicals, fluorochemicals, hydrogen peroxide); performance products (technical polymers, specialty chemicals, functional additives). With its eight research centers worldwide and internationally recognized brands, Arkema holds leadership positions in its principal markets.

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### KN Platech America Corporation

KN Platech America Corporation is a North American plastic blow molder of foam ducts, energy absorber pads, luggage boards and plastic functional parts. Located in Shelbyville, Indiana, KNP is a joint-venture between Japanese-based Kyoraku Co. Ltd. and Nagase & Co. Ltd.

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### Ticona Engineering Polymers

Celstran® composites encompass long-fiber and continuous-fiber reinforced thermoplastics, delivering structural and appearance benefits. Nearly all types of semi-crystalline and amorphous thermoplastic polymers used as matrix materials can be combined with a wide range of fibers and additives. Portfolio of molded-in-color and appearance polymers, including new MetaLX™ metal-effect polymers, deliver cost savings and aesthetics for interior trim / structural components. New Hostaform® S-series and HS15™ POM for improved part performance.

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# New ITB Multiclient Reports

- **Automotive Integrated Center Stacks 2011** - Published July 2011
- **Alternative Powertrain Cost and Energy Performance Comparisons** - Published July 2011
- **Automotive Fuel Systems 2011** - Published September 2011
- **Automotive Window and Exterior Sealing Systems 2011** - Published September 2011
- **Realizing Economic Value from Vehicle Mass Reduction** - scheduled for 2012

## ITB Consulting Expertise

