



CMC Meetings

April 24 – 25, 2018
NXP Semiconductor
Chandler, AZ

Facilitators – CMC Private Mtg
Bruce Adams and Lita Shon-Roy

Facilitators – CMC Joint Meeting
Diane Scott and Dean Freeman

CMC Anti-Trust Reminder

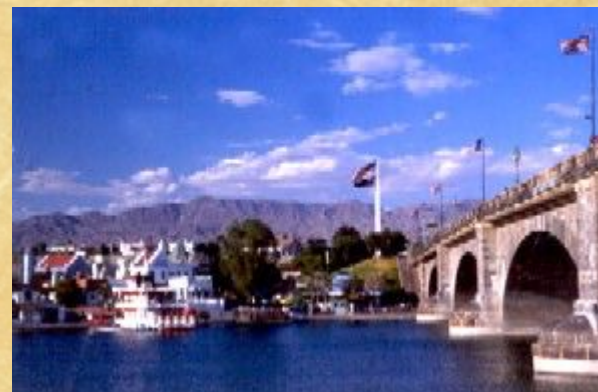
- CMC Fabs activities are a coordinated effort among competitors in the semiconductor device fabrication industry and are, therefore, subject to antitrust laws.
 - Although this coordination is perfectly legal under U.S. antitrust laws, we want to make sure that no antitrust risks are raised by the manner in which the CMC Fabs program is carried out. Accordingly, these guidelines may go somewhat beyond the prohibitions of the law, but that is done in the interest of safety.
- The penalties for violating antitrust laws are quite severe, including large fines and even imprisonment of individuals found guilty of illegal conduct.
 - Contrary to the popular belief that the government has relaxed antitrust enforcement, in recent years the Justice Department has recommended jail sentences for the majority of persons convicted of violating antitrust laws. Moreover, the U.S. Supreme Court has ruled that a trade association may be held legally responsible for the unauthorized, as well as authorized, acts of its members. Accordingly, every effort must be made to **avoid even the appearance of impropriety.**

Reflections of Arizona



Arizona Weird Facts

- It is against the law for donkeys to sleep in bathtubs
- It snowed 400.9 inches in the winter of 1972-1973 at Sunrise Mountain NE of Phoenix
- It is illegal to ride your horse up the stairs of the county courthouse in Prescott
- It is illegal for women to wear pants in Tucson
- The original London Bridge resides in Lake Havasu City since 1971



Welcome To Arizona

- CMC Member Meetings – April 24 and April 25 AM
 - NXP Semiconductor
- CMC Member/Associates Joint Meeting – April 25 PM
 - NXP Semiconductor
- CMC Conference – April 26-27
 - Hilton Hotel Chandler

Key Topics of Discussion

- **CMC Member Meeting**

- Long Term Agreements – Positive and Negative aspects
- Challenges of having long logistical supply chains for material sourcing

- **CMC Member/Associates Joint Meeting**

- Issues and Challenges of the Process Control Notification Process (PCN) from supplier and enduser perspectives

CMC Member Meeting – Apr 24

Time -	Topic
8:00 AM	Leave Hilton for NXP on Shuttle
8:30 AM	Welcome, Introductions, Meeting Objectives, Agenda Review, Hand out Hot Topics Cards
9:00 AM	Supply Chain Mapping – John Birchenough, Cypress
9:30 AM	Case Studies / Supply-Map / Prepared Hot Topics
10:30 AM	15 min Break
10:45 AM	Case Studies / Supply-Map / Prepared Hot Topics, continued and Complete Hot Topics Index Cards
12:00 PM	Complete Hot Topics Index Cards and Live Survey
12:15 PM	Lunch
1:30 PM	Supplier Presentations – Joe Peterson, BLM – Helium Resources US & Worldwide
2:05 PM	Supplier Presentation – Peter Buckley, Niacet – New AHCI Supplier
2:35 PM	Supplier Presentation – John Cahill, Eastman – Specialty Chemicals Sub Tier Supplier Goes Direct
3:05 PM	20 Minute Break
3:25 PM	Live Survey Discussion
4:10 PM	Wrap Up
4:30 PM	Shuttle Back to Hotel
5:30 PM	Shuttle to Dinner – Brickyard Downtown

Live Survey Link

www.surveymonkey.com/r/cmcf2f418

Dinner Tonite – Courtesy of Linde



Brickyard Downtown
85 West Boston St
Chandler, AZ
5:30 PM

**“... it is unique and creative,
yet approachable and
attainable.”**

Executive Chef Aaron Rickel



CMC Member Meeting – Apr 25

Time	Topic
7:45 AM	Leave Hotel for Meeting
8:15 AM	Case Studies/Hot Topics Continued
10:00 AM	15 Minute Break
10:15 AM	Case Studies/Hot Topics Completion
11:00 AM	Discuss Ad Hoc Topics
12:00 AM	Lunch
1:00 PM	Joint Session Begins
1:15 PM	Introduction/Agenda Review
1:30 PM	End User Presentation – Mark Denny, Intel
2:00 PM	Sub-Supplier Presentation – Kevin McLaughlin, SACHEM
2:30 PM	Direct Supplier Presentation – Fred McNeil, Matheson
3:00 PM	15 Minute Break
3:15 PM	Round Table Discussions
4:15 PM	Round Table Output Presentations
5:00 PM	Wrap Up
5:15 PM	Shuttle Back to Hilton Hotel
5:30 PM	Reception at Hotel

Live Survey

www.surveymonkey.com/r/cmcf2finterest

Next F2F Meetings

Fall 2018

Shanghai, China – Tentative

Spring 2019

Malta, NY - Tentative

CMC Joint Meeting – Apr 25

Time	Topic
1:00 PM	Joint Session Begins
1:15 PM	Introduction/Agenda Review
1:30 PM	PCN Best Practices and Challenges– Mark Denny, Intel
2:00 PM	PCN Challenges from the Supply Side– Fred McNeil, Matheson
2:30 PM	PCN Challenges and Possible Solutions from the Sub-Tier Supply Side– Kevin McLaughlin, Sachem
3:00 PM	15 Minute Break
3:15 PM	Round Table Discussions
4:15 PM	Round Table Output Presentations
5:00 PM	Wrap Up
5:15 PM	Shuttle Back to Hilton Hotel
5:30 PM	Reception at Hotel

CMC Conference – April 26 AM

<u>Time</u>	<u>Presenter</u>	<u>Title</u>
8:00 AM	Keynote – David Bloss, VP/Dir Intel	Patterning Challenges and Fab Materials for Future IC's
9:00 AM	Scott Jones, Managing Dir, KPMG	Macroeconomics
9:30 AM	Jim Feldham, Partner, Semico	IC Device Trends
10:00 AM	Break	
10:15 AM	Lita Shon-Roy, President, Techcet	Critical Materials Market Forecast & Roadmap
10:45 AM	Keith Long, Director, USGS	Global Tantalum Supply Chain: Trends and Future Challenges
11:15 AM	James Votaw, Partner, Keller & Heckman	Regulatory Challenges for Novel Engineered Materials
11:45 AM	Jeff Morris, Dir, US EPA	TSCA Implementation Update
12:15 PM	Lunch	

CMC Conference – April 26 PM

<u>Time</u>	<u>Presenter</u>	<u>Title</u>
1:30 PM	Mark Scholefield, Sr. MTS, Gobal Foundries	Silicon Wafer Quality Roadmaps
2:00 PM	Ken Unfried, Manager, Linde	Neon and Xenon Recycling
2:30 PM	Terry Francis, Sr Analyst, Techcet	ALD/CVD/PVD Metal Materials Market
3:00 PM	Break	
3:15 PM	Reg Parker, Strategy & Operations Program Manager, NXP	Materials Cradle to Grave and the Reverse Supply Chain – Logistic & Control
3:45 PM	Michelle Garza, Sr. R&D Chemist, Fujimi	Quick Turnaround Slurry Ramp Process
4:15 PM	Dennis Brestovansky, Dir, Praxair	Ion Implant Critical Materials
4:45 PM	Risto Puhkakka, President, VLSI Research	OEM Markets and Materials Trends
5:15 -7:30 PM	Not So Usual Roundtables	Break out Topic Discussion over Craft Beer and Soda

CMC Conference – April 27 AM

<u>Time</u>	<u>Presenter</u>	<u>Title</u>
8:00 AM	Sanjeev Aggarwal, VP R&D Everspin	Magnetic Materials for Manufacturing IC's
8:30 AM	Glen Wilk, VP Corporate R&D, ASM	ALD Materials Integration Challenges
9:00 AM	Nicholas Blasco, Dir, Air Liquide	Ru Precursors & Co Precursors Issues
9:30 AM	Lukas Gerlich, Technologist, Fraunhofer	Cobalt Integration Solutions (R&D Accelerator)
10:00 AM	Coffee Break	
10:15 AM	Ed Korczynski, Sr. Analyst, Techcet	EUV Materials and Multi-Patterning Coats & Modeling
10:45 AM	Alok Ranjan, Dir & Sr MTS, TEL	Quasi ALE SiN Technology
11:15 AM	David Thompson, Sr. Dire, Applied Materials	Ruthenium Integration
11:45 AM	Lita Shon-Roy, President, Techcet	Concluding Remarks