

# SEMI International MEMS Steering Group – History and Current Activities in the SEMI MEMS Initiative

SEMICON West 2004

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IMSG Chairman



# Content

- 2002-2003 MEMS Initiative Review
- Opportunity and Challenge: SEMI Strategic Approach to Emerging Technologies
- Building the Foundation
- SEMI International MEMS Steering Group
- SEMI Membership gives you access!
- Future plans

# SEMI Core Services

- Exhibitions
- Standards
- Technical and educational seminars
- Industry data
- Industry advocacy
- Newsletters
- Trade missions
- Symposia
- Workshops

# SEMI Strategic Approach to Emerging Technologies

- **How can SEMI best respond to industry needs?**
  - Enhance value for existing and new corporate members
  - Offer an attractive portfolio of products/services for new members with special focus on MEMS
  - Provide opportunities for exhibiting in all regions
  - Partner with other associations in critical areas that are not served

# SEMI Strategic Approach to Emerging Technologies

- **The Opportunity**

- Worst downturn ever forces SEMI to investigate alternative revenue streams
- SEMI core competencies may not be strong enough to withstand economic long-term pressure
- MEMS/nano technology closely related to existing products/services
- Member and industry-driven MEMS/nano initiative and guidance are available means for success

# MEMS – The New Frontier

- MEMS manufacturing technology very similar to semiconductor technology and offers promising opportunities to SEMI member companies and prospective members
- Industry downturn challenged SEMI member companies and others to explore alternative/related technologies and revenue models
- Since as early as 1994, SEMI has executed numerous MEMS conferences; MEMS exhibit “pavilions” have been a constant at SEMICON Europe and SEMICON Japan for several years

# **MEMS Mission**

**Building the foundation for the path ahead**

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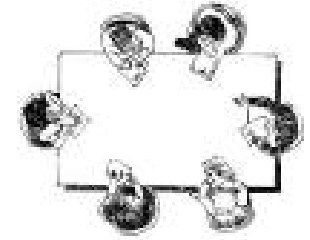
- The Global MEMS Initiative will provide leadership within SEMI to identify strategies and implement actions by which SEMI will achieve its Corporate Mission and Vision statements in the MEMS sector.

# 2002-2003 SEMI MEMS Initiative

## Responding to Industry Push

- Since ~1994, SEMI Japan and SEMI Europe have successfully organized MEMS programs and exhibits
- MEMS interest rose sharply in Q2 2002, starting in Standards; quickly spreading to other SEMI core competencies
- Severe downturn in the semiconductor industry challenged SEMI member companies and others to explore alternative/related technologies and revenue models
- MEMS: obvious fit due to similar manufacturing process and materials used





# A Concerted Volunteer Effort

- North American MEMS Advisory Group formed in September 2002
- >35 volunteers (suppliers, users, academia, associations)
- Task: Identify SEMI products and services valuable to MEMS industry
- Identified four key areas for SEMI activities
  - **Standards** (global MEMS Committee now formed)
  - **Expositions** (MEMS Pavilions at SEMICON Europa, SEMICON West, SEMICON Taiwan, SEMICON Japan)
  - **Technical Conferences** (SEMICON Europa, SEMICON West, SEMICON Japan)
  - **Market Statistics** (challenge but great opportunity)

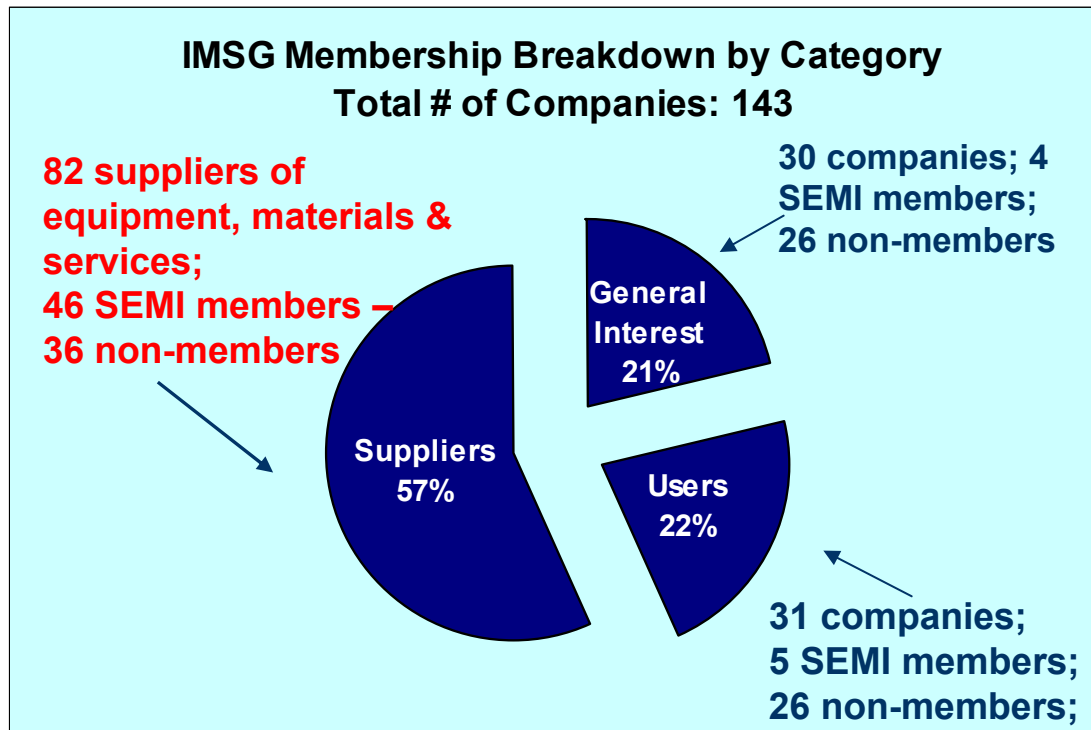
# Going Global

- Disjointed worldwide SEMI MEMS activities called for global umbrella to address MEMS association-wide on a global scale
- April 2003: N.A. MEMS Advisory Group disbands and is absorbed in new **International MEMS Steering Group (IMSG)**
- >180 individual members (143 companies), from N.A., Europe, Japan, Asia-Pacific
- 4 focus areas remain top priority, **nanotechnology** added in N.A. as new activity and exciting opportunity; Austin Nanotechnology TF active!

**I M S G**



# IMSG Membership Breakdown



# IMSG Activities

SEMI



SEMI®  
International  
Standards

Standards

SEMI



Advanced Semiconductor  
Manufacturing Conference and Workshop



World Class Manufacturing

STS

Technical Programs

SEMI

Expo CIS2003 Taiwan2003  
**SEMICON®**  
China2003 West2003  
Singapore2003

Expositions

SEMI



WORLDWIDE CAPITAL EQUIPMENT TRENDS  
(3 month average)

Billings Bookings

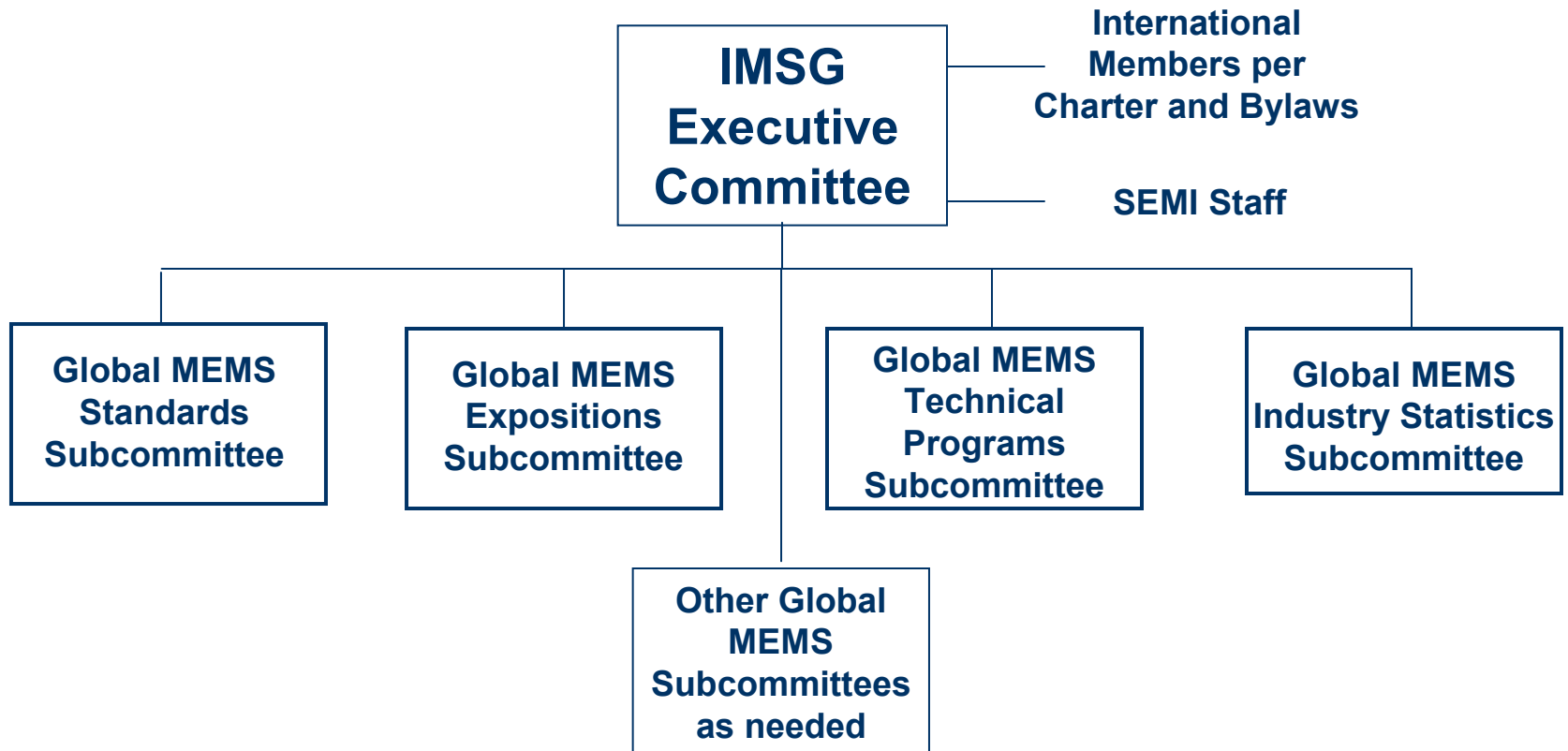
Market Statistics



I M S G



# IMSG Organization



# IMSG Executive Committee Members

- Chair – Joe Brown, Suss MicroTech
- Vice-Chair – Uwe Behringer, UMC Microelectronics
- Regional Representatives
  - Europe – Martin Walker, Oxford Instruments
  - Japan – Masayoshi Esashi, Tohoku University
  - N.A. – Winthrop Baylies, BayTech Group
  - Asia-Pacific – Bevan Wu, BW & Associates
- Members-at-Large
  - Europe – Christian Schaefer, EV Group
  - Japan – Susumu Kaminaga, Sumitomo Precision Products
  - N.A. – Curt Ward, Glimmerglass Networks

# IMSG Executive Committee Members

- Global Subcommittee Chairs
  - Exhibitions – Ellen McDevitt, MEMS Ind. Group
  - Technical Programs – Masafumi Kimata
  - Standards – Robert Scace, Klaros
  - Market Statistics – Jean-Christophe Eloy, Yole Developpement

# IMSG Goals

- Leverage industry and SEMI resources to support key MEMS industry local & global initiatives
- Foster member-to-member contact
  - Establish long-term global MEMS strategy through frequent and streamlined communication
- Build on regional experience and interests to advance MEMS programs across all regions



# The First Success Stories

- Successful **MEMS Pavilions** at SEMICON shows around the world – SEMICON West pavilion premiered in 2003
- Worldwide **MEMS technical seminars** and conferences, often co-sponsored with other MEMS related organizations
- **Global MEMS Technical Committee** formed in April 2003 as part of the SEMI International Standards Program; first drafts under development

# IMSG Asia-Pacific

- IMSG is your path to global exposure
- Successful outreach activities to Asia-Pacific zones and regions in 2003 and 2004 – but more momentum and resources needed to succeed
- Local Taiwan MEMS Advisory Group established in September 2003; June 2004 MEMS workshop (MANCEF and ITRI)
- Make MEMS part of SEMICON China 2005
- Reach out to regional producers
  - Introduce themselves and their work to world players
  - Establish contacts
  - Develop business relationships
  - Steer important issues

# How can you join the fun?

- Sign up for IMSG membership – it's free!
  - Receive all IMSG related information automatically
- Become a champion and support one or more of the 4 focus groups
- Send us your ideas, suggestions and concerns
- Together we can make it happen together!

# And In Conclusion...

IMSG needs YOUR Participation !

Contact:

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