Semiconductor and Emerging Markets – Industry Trends and Developments

Kai Fai, Ng
President SEMI Southeast Asia
SEMI Connects

SEMI is the global not-for-profit association connecting and representing the worldwide electronics manufacturing supply chain.

For more than 40 years, SEMI has connected its members worldwide to achieve together what each cannot accomplish alone.

SEMI provides the platforms for the electronics manufacturing industry to connect, synchronize technology, discover new business opportunities, and change the world.

- 250,000+ Global Attendees at SEMICON Shows
- 500,000+ SEMI Member Individuals
- 2,100+ SEMI Member Companies Worldwide
- 950+ SEMI Standards
- 5,000+ Standards Volunteers
- 11 Annual Industry Expositions
SEMI is the place to connect, collaborate, and solve problems in a pre-competitive forum. Platforms for regions and special interest groups are connected to global common interests.
SEMI Channels Connect

Membership & Communities

Events and Expositions

Standards

Market Data and Research

Advocacy

Insight

Access

Visibility

Influence

Leadership
Semiconductor Cycles

Maturing industry with lower growth rates

Source: SIA/WSTS historical year end reports, WSTS June 2016 Forecast
IC Insights IC Revenue Outlook

Positive growth rates 2017 through 2020

Source: IC Insights
Internet of Things (IoT)

*Strong growth expectations*

Source: SEMICO Research
MEMS, Sensors and More

*From Moore to More-than-Moore and beyond*

Source: Yole Developpement
MEMS, Sensors and More

*From Moore to More-than-Moore and beyond*

![Graph showing semiconductor CAGR and revenue growth for various categories including Smart Glasses and HMD/cameras, Smart Watches, Solid State Lighting, Other Wearables, Fitness Wearables, ADAS, Security, Utility Smartphone, Premium Ultramobile, SSD, Basic Smartphone, Server, LCD TV, and Premium Smartphone. Most categories have < 10% CAGR and < $10 billion revenue.](image)
Cost Efficient Miniaturization of Semiconductor Fabrication

-- from Chip to PCB Level Integration
What to Expect @ SEMICON SEA 2017

NEW
- Future Electronics Mfg Pavilion
- Failure Analysis Pavilion
- High Tech Hardware Start-ups

NETWORK
- >300 exhibitions
- >7500 expected peers from >15 countries

MAKE A DATE WITH FUTURA-X @ World of IoT
- Xperience and Immerse on how semiconductor is enabling the Connected World

CONFERENCE
- 8 technical forums
- SEMICON University

Utility Proposition
SEMICON SEA 2017 Broad Overview

Pre-Event
- Public Relation Campaign
  - SEMICON Promotion in
    - Taiwan
    - Japan
    - Korea
    - China
  - SEA regional promotion through direct SEMI outreach
  - Press Releases & Press Conference
  - Feature interviews in regional newspaper
    - Chief Minister
    - Minister of Trade
    - Regional SEA Industry CEOs
  - 5 months ad in Google, FB
  - In Flight Publicity 3 months
- GOH - Minister of Trade and Chief Minister
- Keynotes from NXP, HTC, K&S
- CEO Speaks Forum on Smart Mfg
- Future Tech Experience Showcase@World of IoT
- SEA Technology Startups
  - Technical Forums

Post-Event
- Public Relation Campaign
  - Post Press Release
  - Features 2017 success via social media/youtube
  - Promotion of 2018 SEMICON SEA
- MIDA Investment Roundtable
- Vietnam Investment Forum
- China Semiconductor Analysis
- Future Electronics Manufacturing Pavilion
- Failure Analysis Pavilion
- Business Matching
- VIP networking Event
What to Expect @SEMICON SEA 2017

Future Electronics Manufacturing Pavilion

Targeted Mktg

Failure Analysis Pavilion

Start up
Futura-X: Snap-shot of companies exhibiting

A. HTC VIVE is IN!

B. Exiii is IN!

C. ADAWARP is IN!

D. SAP Prime is IN!

E. GREENMAX is IN!

F. REKA is IN!

G. Cytron is IN!
Technical Symposia

- Market Trends Briefing
- Advanced Packaging
- Product & System Testing
- Future Electronics Manufacturing
- IC and PCB Failure Analysis and Testing
- Technology Innovation Forum (IIoT)
- LED Technology
- Yield Management Solutions

The content of the programs are guided & governed by SEMI Technical committees. We highly encourage presentations featuring collaborative work between end users and their suppliers. Call for papers begins Nov 2016
What's there for you?

Build Business Network

Up to date Market and Technical Trend

holistic Ecosystem

>7500 visitors

>200 Exhibiting companies
SEMICON SEA 2018 Survey Matrix

- Business Relevance
- Macro Stability
- Access
- Govt Support
### SEMICON SEA 2018 Survey Matrix

#### Business Relevance

**Q8** From the list below, please rate the countries in which you might participate in the next SEMICON SEA Show (1 being most preferred and 5 being the least preferred)

<table>
<thead>
<tr>
<th>Country</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>[3]</td>
</tr>
<tr>
<td>Malaysia</td>
<td>[2]</td>
</tr>
<tr>
<td>Singapore</td>
<td>[1]</td>
</tr>
<tr>
<td>Thailand</td>
<td>[1]</td>
</tr>
<tr>
<td>Vietnam</td>
<td>[4]</td>
</tr>
</tbody>
</table>

Answered: 41 Skipped: 7

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**Q9** The reason for the above country choice

<table>
<thead>
<tr>
<th>Reason</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer base is present</td>
<td>[4]</td>
</tr>
<tr>
<td>To penetrate the growing</td>
<td>[3]</td>
</tr>
<tr>
<td>Accessible and centralized</td>
<td>[2]</td>
</tr>
<tr>
<td>To assess the country market</td>
<td>[1]</td>
</tr>
</tbody>
</table>

Answered: 41 Skipped: 7
SEMICON Southeast Asia 2017
Enhancing Exhibitor Value in SEMICON SEA
25th-27th April sPICE, Penang
Maintaining a Consistent Brand Presence

SEMI SEA Vision and Mission

Enabling the development of a regional and global electronics supply chain and to positively influence the growth and prosperity of our members and partners

...through an active marketing presence in SEMI SEA events platform
Maintaining a Consistent Brand Presence

<table>
<thead>
<tr>
<th>Jan-17</th>
<th>Feb-17</th>
<th>Mar-17</th>
<th>Apr-17</th>
<th>May-17</th>
<th>Jun-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEMI Technical Committee meeting</td>
<td></td>
<td></td>
<td>SEMICON SEA 2017 25th - 27th April (Penang, Malaysia)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Jul-17</th>
<th>Aug-17</th>
<th>Sep-17</th>
<th>Oct-17</th>
<th>Nov-17</th>
<th>Dec-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEMI Technical Committee meeting</td>
<td>SEMI RAB Quarterly Meeting</td>
<td>Advanced Semiconductor Technology Conference Thailand</td>
<td></td>
<td>SEMI-IMEC MedTech Conference</td>
<td>SEMI SEA Members &amp; Partners Appreciation Night</td>
</tr>
</tbody>
</table>

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<tr>
<th>Jan-17</th>
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<th>Mar-17</th>
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<th>Jun-17</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LED EXPO 2017 (Bangkok, Thailand)</td>
<td></td>
</tr>
</tbody>
</table>

Increase brand visibility with SEMI SEA unique events
Maintaining a Consistent Brand Presence

Value Benefits in

- **Generate Highly Targeted Leads**
  - Forward looking enabling early formulation of key objectives
  - Interaction and building of network that you can follow-up as potential lead

- **Develop or strengthen Your brand**
  - Position Your company close to industry’s blue chip thus enhancing the brand

- **Taking a direct approach to sales**
  - Targeted potential audience

- **Easing of marketing planning and budget**
  - Assist in planning cycle and marketing mix
  - Increasing return of value at higher discount rate
SEMI Membership Enables YOUR Business

**GROWTH**
Grow your company through SEMI Regional and Global engagement

**VISIBLE**
Create awareness through SEMI Regional and Global activities

**LEVERAGE**
Up close with industry momentum and development through SEMI Market Research

**NETWORK**
Winning partnership through SEMI Regional and Global networking events
# SEMI Market Data Reports and Databases

## Fab Forecast
- Semiconductor, Power Devices, MEMS, Opto/LED

## Equipment & Component Market
- Equipment Market Data Subscription
  - Book-to-Bill Report
  - Semiconductor Equipment Market Statistics (WWSEMS)
- New Equipment Forecast
- SEMI Secondary Fab Equipment Report
- Mass Flow Controller Market Statistics
- Regional Trends

## Material Market Semiconductor Materials
- Material Market Data Subscription
- Photomask Characterization Report
- Silicon Reclaim Wafer Characterization
- Customized Benchmark Data Collection
- Global Semiconductor Packaging materials Outlook

## Packaging Market and Other Market
- Global Semiconductor Packaging Materials Outlook
- China Semiconductor Packaging Market Outlook
- Opto/LED Fab Watch or Forecast
- Customized Benchmark Data Collection
- Regional Spotlights
Enhancing Exhibitor ROI in SEMICON SEA 2017

SEMI multi-channel outreach opportunities

- Net Attendance
- Potential Audience

Exhibit Forward Planning

- Exhibit Attraction
  - Attention getting
  - Design & Graphics
  - Product mix

- Staff Engagement
  - Staffing
  - Product Training
  - Demo & Interactive

Results

- Leads Follow-up (Lead Retriever)
  - Sales
  - Accelerate sales cycle
  - PR
Enhancing Exhibitor ROI in SEMICON SEA 2017

Broaden Net Visitor Attendance

✓ Exhibitor Marketing Opportunities via

  i. SEMI SEA Electronic direct mailer with company banner
  ii. SEMI SEA microsites branding exposure – EMO

✓ International and Regional Media Outreach

  i. International exposure through SEMI Global marketing
  ii. SEA Positioning (inclusive India)
  iii. Gain Buy-in through clever placement of “dialogue session” in Regional exposure
## SEMICON SEA Public Communications Strategy

### Broadening Net Regional Visitors Attendance

#### Regional Positioning
- Targeted regional traditional PR media outreach
- Social Media (FB and Google) outreach
- Regional thought leaders press interviews
- In-flight advertising in Airlines
- Visitors Promotion Campaign via Lucky Draws

#### Fire-Band Content
- Futura-X @ World of IoT
- Vietnam & Msia semiconductor summit
- Market Trend inclusive of The Rise of China Semiconductor
- Future Electronics Manufacturing centric exhibit/forum
- Launch of SFAM

#### Amplify Brand
- SEMICON SEA continues to be THE LEADING platform for the electronics supply chain regionally
- SEMI SEA champions the call for industry players within the region to **collaborate and Own the future Today**
Sizing Your Potential Audience through Active Engagement

- **Exhibitor Private E-Invitation**
  1. Dedicated Exhibitor SEMI SEA Registration portal
  2. Targeted and personalized Potential Audience

- **Exhibitor Marketing and Promotion Opportunities**
  1. Pocket Guide Directory – Full/Half page Ad
  2. Technical Symposium Sponsor
  3. Onsite railing banner ("You are Here")

- **SEMICON SEA Mobile App**
  1. Putting YOUR company front and center
### Exhibitor Forward Planning

#### Staffing Planning

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Formula</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Estimated Visitor-ship</td>
<td>$(a)$</td>
<td>7500</td>
</tr>
<tr>
<td>Percentage Booth Visitors</td>
<td>$(b)$</td>
<td>40%</td>
</tr>
<tr>
<td>Total Booth Visitors</td>
<td>$(a) \times (b)$</td>
<td>3000</td>
</tr>
<tr>
<td>Percentage Target Visitors</td>
<td>$(c)$</td>
<td>6%</td>
</tr>
<tr>
<td>Net Target Visitors</td>
<td>$(a) \times (b) \times (c) = (d)$</td>
<td>180</td>
</tr>
<tr>
<td>Show Hours</td>
<td>$(e)$</td>
<td>24</td>
</tr>
<tr>
<td>Less Non Active Hours</td>
<td>$(f)$</td>
<td>9</td>
</tr>
<tr>
<td>Active Show Hours</td>
<td>$(e) - (f) = (g)$</td>
<td>15</td>
</tr>
<tr>
<td>Number of Visitors per Hour</td>
<td>$(d) \div (g) = (h)$</td>
<td>12</td>
</tr>
<tr>
<td>Time Spent per Visitor (mins)</td>
<td>$(i)$</td>
<td>10</td>
</tr>
<tr>
<td>Total Time Spent (mins) per Hour</td>
<td>$(h) \times (i) = (j)$</td>
<td>120</td>
</tr>
<tr>
<td>No of Qualified Booth Staff</td>
<td>$(j) \div 45 = (k)$</td>
<td>3</td>
</tr>
</tbody>
</table>

**highlighted in Red Bold is determinant of staff attention duration**
Exhibitor Forward Planning

Final Checklist on promotional readiness (2 months)

- Re-Read exhibitor manual
- Reserve any additional organizer’s marketing toolkit
- Determine booth staff strength
- Identification of booth staff
- Plan pre-show staff meeting – Cascading exhibitor briefing to Actual Staff manning booth
- Develop briefing kit for booth staff
- Confirm pre-show promotion is in place
- Dissemination to all current and future targeted customers – We are Here Messaging
- Confirm plans for onsite staff training
- Check on production of graphics and printed materials
Thank you for partnering with SEMI Southeast Asia!

For further queries, please do not hesitate to contact SEMI Southeast:

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