

**SEMICON<sup>®</sup>**  
**Europa2015**

**PE 2015**

**6–8 October**  
**Dresden, Germany**



## SEA session

### SEMI Fab Investment and Secondary Equipment Market update



C. Tseng  
Sr. Research Manager  
SEMI, Taipei, Taiwan

#### Abstract

SEMI will present latest year-to-date figures and forecast into 2016 of fab investment trend. The data will cover fab equipment spending trend by regions and by major product segments. With the rise of IoT opportunities, we will discuss the outlook of 150mm/200mm fabs capacity and investment trend at worldwide level as well as Europe-specific status. We will also look into secondary equipment market opportunities that is on the rise in recent years. We will provide our perspectives on the market drivers and possible future transitions.

#### Biography

Clark is a senior research manager at SEMI. His major responsibility is to track and evaluate semiconductor front-end fab investment in Asia Pacific region. His research also spans over LED, flat panel display and PV industries. His expertise includes in-depth analysis of the industry dynamics, as well as the fundamentals of market forecasting, competitive analysis, and strategic planning.

Prior to SEMI, Clark worked for Qimonda as the manager at Strategy and Business Development division, where he managed market & competitive intelligence function in Asia/Pacific.

Clark Tseng received a Bachelor of Business Administration and a Bachelor of Arts in International Relations from National Chengchi University in Taiwan.

## The "Internet of Things"- Opportunities for the Secondary Equipment Market



G. Bignell  
FE Equipment Purchasing Director  
STMicroelectronics, GPO, Crolles, France

### Abstract

Previously the industry has seen the emergence of the PC and then the portable telephone, both of which created enormous demand, opportunities and change. Who could have imagined the impact today of the smart phone? when just a few short decades ago the first bulky, cumbersome (barely) portable phones arrived. The next technology wave is going to be even bigger and impact our lives even more. This wave is the IOT. Today we are just at the beginning of this great adventure, where the possibilities of the IOT are only limited by our collective imaginations.

Both the PC and the telephone pushed Moore's law along and were at the leading edge, forcing change from micron to sub-micron to single digit nanometer technologies.

The IOT is different and requires broader technologies - sensors, MEMS, power management, connectivity and microcontrollers. The leading edge technology race will surely continue, driven by next generation microprocessors and ever denser memories . But in parallel, many of the new and innovative IOT technologies will not require the latest process equipment. The sweet spot to economically produce these devices will be reusing, recycling and repurposing trailing edge equipment mainly focused on 200mm. Clearly the secondary equipment market has a great role to play.

### Biography

Gareth Bignell has been responsible for the sourcing of ST's fab equipment, spare parts and maintenance contracts for all ST sites worldwide for the last 7 years. Prior to this, he was the equipment selection program manager for the Crolles2 Alliance where he closely worked with Freescale and NXP on sourcing all of the 300mm tools for this successful multi-company alliance. He started his career as an equipment engineer in Inmos UK before holding various engineering and management roles at ST's Agrate and Crolles sites. Gareth has worked in the semiconductor industry for more than 30 years since graduating from the University of Wales, Newport.

## Supporting the Secondary Market - Matching Products & Services to Changing Customer Needs



T. McKie  
CEO  
memsstar Ltd, Livingston, United Kingdom

### Abstract

The Internet of Things is truly upon us. Exploding at an exponential rate it is expected to grow at a CAGR of 31.72% for the five years to 2019. The potential is limitless as market sectors of all types embrace the opportunities of integrated electronic devices in a huge range of products and services which will inform, measure, control, record and report. This has resulted in a massive outflow of new systems & applications to be delivered faster, smaller and at very low cost.

To meet these demands, there is pressure on industry suppliers to increase capacity & throughput on new processes, whilst working with lower technology equipment, in many cases at 200mm. To be competitive costs are key and the successful adaptation of secondary equipment is paramount. A supply chain which can quickly fulfil the need for re-purposed equipment, support and services is critical.

We need to understand developing customer needs and identify how we can cost-effectively meet them in a way that will allow new applications to be built competitively. In the last 15 years we have seen customer requirements for secondary equipment change dramatically. From days of simply refurbishing or making small modifications to older equipment, we now have to provide bespoke solutions for a wide variety of applications, extending the life span and evolving the functionality of older equipment.

This isn't without its challenges - the availability of donor tools, where to source legacy components, the provision and knowledge transfer of engineering and process expertise in older technologies, and ensuring standards and quality to satisfy a demanding industrial environment.

This presentation will address the evolution of the secondary equipment market and how the secondary industry can support that market, providing a supply chain with solutions to satisfy customer demands. It will also look at future challenges that will need to be faced, exploring the potential to transform them to new opportunities.

### Biography

Tony McKie is CEO of memsstar. As one of the company's founders, McKie was responsible for developing the ORBIS, XERIC and AURIX product lines and managing business development activities for the single wafer release etch platforms. He has an extensive background in semiconductor equipment manufacturing through prior management roles at Electrotech, Lam Research and Applied Materials. He has a BSc in Physics.

## Customized vacuum valve solutions bring used equipment to the next performance level



R. Pschenitschnigg  
Executive Vice President Global Services  
VAT Vakuumventile AG, Global Services Division, GSE, Haag, Switzerland

### Abstract

The secondary equipment market, served by OEM's, turnkey companies, refurbishment houses, brokers or directly from the fab (as is), is not only growing, it's getting to its next level of performance. Depending on what kind of electronic devices are manufactured by secondary equipment, the end-user has to consider critical functions like automation (control systems), CE compliance, critical components (like power supplies, pumps and valves - to name but a few) and their life time. The transition of mature device manufacturing to support new applications and processes makes it necessary to cooperate with critical component suppliers. The formula to success is to manage issues like speed, quality, reliability and risk versus cost. As such, identifying the right product experts and component specialists is key when it comes to spare parts, product maintenance and repair, product upgrade and continuous improvement.

This presentation will discuss the requirements towards component suppliers in the field of genuine spare parts, product substitutes, controlled phase-out processes, product upgrades and enhancements, especially customization. On top of that, the focus is on bringing used equipment to the next performance level by utilizing the product and technology roadmap from original component suppliers, finally leading into improved tool performance, optimized total cost of ownership, higher particle performance and overall yield. Examples of improved tool performance will be demonstrated, backed by respective data.

### Biography

Ronald Pschenitschnigg has been working in the vacuum and coating industry for over 20 years with positions in technical communication, product development, customer service, product management and business unit management at Balzers Process Systems, Unaxis and VAT.

His current role, Executive Vice President Global Services, includes both strategic and operational activities in the field of global services for VAT's world-wide customers. With the ultimate objective to support the vacuum and coating industry with a well-structured service-portfolio, Ronald strives for best-in-class service and customer support around the globe.

Ronald Pschenitschnigg has a Masters degree in Business Administration from the University of Applied Sciences in Dornbirn / Austria in cooperation with the University of Liechtenstein. His technical background is electrical engineering.

## **An OEM's view of the secondary system's market.**



E. Shekel  
Senior Vice President TEL Europe  
Tokyo Electron, Crawley, United Kingdom

### **Abstract**

The secondary equipment market has become an established option in today's manufacturing environment, adding capacity or technical capability. Over the last five years OEM's like TEL have developed their range of secondary products, giving FAB's OEM quality solutions at an affordable level of investment. Many companies specialise in this marketplace, however, it is principally the OEM's who can provide the broad-based solutions from a global network which meet today's customer needs.

This presentation will articulate the value propositions that OEM's offer as well as discuss how we in TEL can offer innovative "hybrid" manufacturing solutions allowing TEL CUE (Certified Used Equipment) to remain commercially attractive as well as supporting new process integration on to mature platforms. Additionally, this presentation will discuss how TEL can provide affordability programs enabling FABs to control their OPEX expenditure.

### **Biography**

Eyal has 23 years of experience in the semiconductors industry. After graduated the Technion (Israel institute of technology), in mechanical engineering, he has joined Applied Materials in 1993. Eyal has served 5 years on engineering roles in Etch and CVD, working with customers in Europe and US. In 1997 he has joined Tokyo Electron and established its subsidiary in Israel, ending this position in 2004 as the General Manager. In 2005 Eyal was appointed as the Vice President of TEL Europe looking after service, through the UK headquarters. In 2009 Tokyo Electron started to build its Field solution business unit, and Eyal took a leading role in developing the used equipment business, being the first region out of Japan, and creating a local European refurbishment centre in Holland. In 2013 Eyal was promoted and is now Senior Vice president for service and support operations. He is 52 years old and leaves in Israel.