IPS Roundtable in the City
“Electronics: Fueling Asia’s Prosperity”
Mr Francois Guibert
Corporate Vice President and Chief Executive Officer, Asia Pacific
ST Microelectronics

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Marina Mandarin Singapore

Summary

1 This is a summary of the proceedings at the Institute of Policy Studies’ (IPS) first Roundtable in the City, titled Electronics: Fueling Asia’s Prosperity held on 8 October 2008. The speaker was Mr Francois Guibert, Corporate Vice President and Chief Executive Officer for Asia Pacific, ST Microelectronics.

2 The IPS Roundtable in the City series was formed to tap on the rich body of knowledge of its corporate associates. Professor Tommy Koh opened the session with an introduction of ST Microelectronics as one of the world’s top ten microelectronics companies which had proven it was possible to be both green with its efficient use of energy, water and materials, and profitable.

Presentation

3 Mr Guibert began his presentation with an overview of the global electronics industry and its role in the global economy. He said that electronic systems and products were more pervasive than people were aware of. Electronics could be found in almost every common home and office appliance, and most other (non-electronic) industries. Most services would not be able to function without electronics. In highlighting the economic contributions of the electronics industry, Mr Guibert said that electronics generated more added value than any other manufacturing industry because of its pervasiveness. The electronics industry drove and generated in other related industries (for instance, supply chain, materials and gas) thrice the number of jobs that were held by workers within the industry. The electronics industry accounted for 30% of the fixed asset investments of all industries in the global economy and would continue to grow at twice the rate of the global world GDP. The speaker went on to show how electronics had been a key enabler for the global economy - while the electronics industry itself generated an output of US$1,400 billion in 2007, it directly induced (with the semiconductor industry) the generation of $5,000 billion in revenue for service providers out of a global GDP of US$50 trillion. Currently, the electronics industry he said, had a strong global presence here with 62% of its systems production taking place in Asia.

3 Mr Guibert gave an overview of the development of the electronics industry from its take-off in the 1950s. The success of countries that were now leaders in the industry, namely the United States, Europe, Japan, Korea, Taiwan and now China, broadly resulted from following the approach of first launching strategic programs through research and development in electronic systems
before reinforcing that with research and development in semiconductor technology in particular.

4 Mr Guibert identified the ingredients for success in the electronics industry having conducted his own research on this. The first step that these countries took was their specialisation in key electronic applications. Taiwan focused on the development of personal computer technology, while Japan and Korea targeted at the consumer industry and Europe focused on the telecommunications industry. The United States was the exception but has become more specialised today. This was followed by the conditions of sufficient governmental focus in providing an educated (university level) workforce to supply a manpower base for the electronics industry to flourish, the provision of incentives that reduced the high financial barriers to entry into the sector and the building of technology park infrastructure. Another key ingredient that resulted in the success of these countries was the sustained focus on research and development efforts by the government and key financial and industrial players. Another observation he made was the fact that many of the leading companies today resulted from a diversification strategy of existing conglomerates. Taiwan may be a world leader today in electronics development, but it was interesting to note that it had no activities in the field till 30 years ago. The development of start-up companies in the United States, on the other hand, helped to propel the electronics industry there. The final key element was the development of close partnerships and collaboration between the electronics and semiconductor industries with other industries. Mr Guibert cited the example of biotechnology where his company helped scientists develop a microchip which could diagnose avian flu and other diseases. These minimum conditions were likely to result in a competitive electronics industry, which would give rise to further development of the semiconductor industry, which could continue to propel economic development in the Asian region.

Question and Answer Session
5 In the question and answer session that followed, a participant asked how ST Electronics was positioned to deal with the current global economic slowdown. Mr Guibert replied that although the sector would be affected by the reduced demand from consumers cutting back, the electronics industry was diversified enough to cope with the economic downturn. He further qualified that the bursting of the technology bubble in 2000 was due to overcapacity and that the electronics industry had learnt the importance of quick response in putting capacity in line with demand as soon as it was possible. That way, the semiconductor industry would be able adapt quickly this time round.

6 Another participant asked if there were any lessons that Singapore could learn from the two Asian success stories of Taiwan and Korea, currently, leaders in the global electronics field. Mr Guibert commented that Singapore had most of the abovementioned prerequisite ingredients for success, for instance, adequate funding and infrastructure, with the exception of a large enough local market, as these countries started off with the local market before moving to the regional and global domains. He also noted that Singapore would probably have to boost the level of entrepreneurship which could perhaps benefit from the diversification of her local major conglomerates that now exist in the economy.