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“Message from GSA New Chairman”

By Dr. Nicky Lu

I would like to thank the GSA board members, Jodi and her team for giving me their support and electing me the chairman of the GSA for the next two years. I would also send my acknowledgment to the current Chairman, Dr. Dwight Decker. It is my great honor and pleasure to serve GSA members and I hope that I can contribute to the semiconductor industry worldwide. Following are a few points I would like to share with you regarding my appointment.

1. GSA’s Culture: Open and Free

The invention of the transistor, Integrated Circuits, and open technology for use without License fees has triggered a revolution in semiconductors and incredible change in our civilization. To my knowledge, today we have 6B people in this world, and each is using 1B transistors per year! This remarkable fact shows the power of setting a free, open environment for disseminating wise solutions

The FSA, established in 1994 by several visionary persons including Jodi, really facilitated the rapid growth of IC fabless and foundry industry by building up a platform for open communication and cooperation, which has been very critical for business advancement.

Then, in 2008, the FSA grew to become the Global Semiconductor Alliance, with a larger scope and stronger vision, to serve as a global platform of cooperation among all the semiconductor companies and educational institutions across the world. Now why did the GSA elect a General Chair from Asia? The GSA leaders did take a far vision and open mind to put their organizations into a truly international structure with their chairmanship rotated between North America, Asia, EMEA, and other regions.

2. Asia Role: More Contributions Coming from Asia Including China, India, Japan, Korea, Taiwan, and etc.

On Asia specifically, the semiconductor industry is growing rapidly. For example, in 2008 the worldwide semiconductor market size was US\$249B, with 50% from Asia Pacific, 33% from Mainland China and 6% from Taiwan. This 39% market

share of China and Taiwan is growing continuously in the double digits and I predict within the next five years the consumption of ICs will likely approach 50%.

On the IC supply side, in 2008, USA had 50% of the share, about US\$124B, Japan about 22%, Europe about 10%, and Asia only 18%, about US\$45B. There appears to be great momentum currently emerging in Asia to increase its share.

Within Asia, there is some interesting information regarding Taiwan. Records show that the 2008 production value in Taiwan is around US\$43B. This includes US\$14B from the wafer foundry segment and US\$10B from the packaging and testing service segment, both of which are the backbone supporting the growth of the IC design industry. Now the question is: how can a small place like Taiwan be #1 worldwide in the foundry segment, #2 in the fabless segment, and the #1 place for packaging and testing? Well, my personal entrepreneurial experience has shown that Taiwan has three successful factors, working together like a chemical recipes: One, Taiwan has built a complete service-oriented supply chain to facilitate IC design and production; two, we have a high density of “free agents” such as start-ups and well-trained professionals; and three, we have abundant entrepreneurial passion. These three recipes have made an explosive chemical reaction that has resulted in a lot of successful companies, not only in Taiwan but also all over the world. Going forward, I believe that the GSA can act as a catalyst to facilitate similarly tremendous results worldwide and expand the Taiwan model into the globe.

3. Global Technology and Business Structure: A New Trend Toward Heterogeneous, Virtual Vertical Integration by Clusters

Moore’s Law, a homogeneous, monolithic integration of transistors, will continue for 15 more years toward 10nm production. At the same time, technology will develop into more than 3D integration with different types of dies integrated inside one package, named as Heterogeneous Integrations of dies. This trend will further generate more impacts of ICs on our civilization.

To support this Heterogeneous Integration, I believe a major change for corporations in the IC industry is a new business model, named as CVVI (Clustered Virtual Vertical Integration). That is, success or failure in our industry is not about a single champion company anymore. Instead, it depends on a champion of a cluster of multiple companies willing to develop technology and

business successes together from the start of complicated projects and bearing profits and losses collectively.

A strong and supportive GSA is essential for the new era to embrace both homogeneous and heterogeneous integration of technology and business, and moreover, to enhance the quality and skills of the people behind.

4. Prospects: Mutual Learning, Green, Joy, and Change

As mentioned above are some successful experiences in USA and Asia, but an envy success was worth to mention from Europe. That is, the GSM net. Coordinated efforts were initiated in 1982 in EU to establish the first GSM standard after 1990. The first customer service was launched in Finland in 1991 and today there are more than 2B users around the world, among which 1B users are in Asia. In fact, the user growth rate has on average, doubled every year from 1992 to 2006, even faster than Moore's Law. Now, just one letter apart from GSM net is our GSA net: a similarly powerful driver of advancement.

Next is a hot issue at this moment: keeping our Earth green. This is critical for humanity and the most powerful tool in this mission is using semiconductor technologies. The GSA will continue to urge all members to look into environmental issues and promote environmental awareness, as well as creating new devices to keep the world green.

After I attended the FSA, I found there are several secrets to why people keep coming. I need to give a credit to Jodi, Jeremy and their team to run the GSA well. They know how to keep GSA full of fun. Imagine how you can get so many smart CEOs and executives from so many successful companies constantly getting together over the world. First, the GSA provides a fair, low-friction, and joyful environment. Each company represents one vote, big, small, or even just a start-up. Second, every activity is carefully designed to maintain very high quality and efficiency. So participants never feel like their time is wasted and always learn something. Third, the GSA program can make even competitors feel they are addressing common issues on how to build a better infrastructure for every company's growing needs. Fourth, the GSA is pivotal to global trans-nation and trans-region cooperation; our members' gathering is like a pre-competition communion in the Olympic Village. Fifth, I have seen semiconductor industry elites including CEOs from large corporations contribute to the GSA with passion,

which spreads throughout the group. Those are five reasons why we continue to get great, diverse gatherings, and continue to have fantastic forums.

On a separate and final note, I want to acknowledge the turbulent economic times we have gone through recently. Well, Crisis means Opportunity. The world's economy went through a tsunami and is now gradually stabilizing under the collaboration of country leaders worldwide. Similarly, the semiconductor industry went through a downturn. However, it has been bounced back faster and earlier than the global economy. During the downturn, in the GSA I saw many company CEOs cooperate and help each other to rebound their businesses. As company leaders, we all know that the current recovery from recession presents massive opportunities for transformation. As we seek to capitalize on these opportunities, participating in the GSA is a great help, as the GSA facilitates global cooperation, leveling of the field, and reducing of barriers, and in doing so, the GSA assists companies as they face global structural change.

To close, the GSA has been and will continue to be of great service to its members, the semiconductor industry worldwide, and to humanity. So I want to re-iterate how much of an honor it is for me to serve as Chairman of the GSA and assist our efforts to deliver more advanced technologies for a better tomorrow. Thank you.