The World Semiconductor Council at 20 Years:

Empowering Economic Growth and Social Progress through Advancements in Semiconductor Technologies

Seoul, Korea
May 26, 2016

The world's leading semiconductor industries, holding their 20th annual World Semiconductor Council meeting this week in Seoul, Korea, today unanimously reaffirmed their commitment to 'Prosperity and Progress through Semiconductors' and announced an ambitious program of initiatives that will have a significant, positive and lasting impact on economic growth and social progress for generations to come.

Semiconductor technology and devices are the lifeblood of many of the world's most fundamental technological advances in recent decades, including profound breakthroughs in telecommunications and computing, environmental protection, energy efficiency, transportation, product safety and medical technology.

The World Semiconductor Council (WSC), established in 1996, consists of the semiconductor industry associations of each of the world's leading semiconductor countries and regions: China, Chinese Taipei, Europe, Japan, Korea, and the United States. The WSC meets annually to bring together industry leaders to address issues of global concern and to pursue the goals of promoting open markets, technological advancement and sound environmental, health and safety practices.

Over the last 20 years the WSC's activities in a wide variety of areas have led to numerous landmark achievements. For example, the WSC has successfully promoted a tariff- and barrier-free global environment for the trade of semiconductor products, permitting the free flow of the most advanced semiconductor devices available, lowering costs for consumers, and fueling the revolution in information and telecommunications technologies that has benefited all countries. Our industry has helped advance and expand the key multilateral tariff elimination initiative for technology products, the 81-nation Information Technology Agreement. The WSC has promoted environmental protection by achieving award-winning voluntary reductions in gas emissions of more than 30% over the previous 10-year period. The WSC has also collaborated on efforts to enhance patent quality, prevent the spread of unsafe and harmful counterfeit semiconductors, and promote measures to prevent abusive litigation by patent holders, in order to help advance innovation and improve overall patent systems.

In celebration of our 20th annual meeting, the WSC reaffirms its commitment to proactive policies and measures to make further progress in these and other areas to promote a global environment for innovation, sustainability, and public safety. We are pursuing the following initiatives:

Innovation and Economic Growth

Eliminate tariffs: Strengthen international cooperation to expand tariff-free treatment for advanced semiconductors to make semiconductor products more affordable for consumers and innovators, thus raising global standards of living and promoting sustainable economic growth. Ensure timely implementation of the expanded ITA according to the schedule agreed by all Parties.

Open markets, facilitate trade and promote market-based investment: Enhance market access by reducing barriers to trade, promoting international standards, and aligning global regulatory approaches with industry best practices, including WSC principles on encryption. Support ratification and implementation of the WTO Trade Facilitation Agreement to lower handling costs and improve business conditions. Promote market-based government support that is consistent with WTO rules and obligations.

Strengthen dialogue with governments/authorities: Enhance communication with WSC member governments and authorities to promote transparency and meaningful consultation on emerging policies and regulations and foster policy and regulatory improvements to make advanced semiconductor technologies available to a broader and more diverse array of markets, industries and consumers.

Protect intellectual property: Ensure highly-innovative patents, strengthen protection of trade secrets, and prevent abusive patent litigation practices.

Facilitate industry growth: Enhance and facilitate growth in the semiconductor industry through the development of new technologies and next generation semiconductors that foster public safety and health and provide semiconductor-enabled solutions in electronic equipment, automobile and medical/health-care industries. Contribute to increased investment opportunities, quality jobs and access to advanced and affordable semiconductor products.

Sustainability

Promote environmental protection: Continue achieving energy savings, helping to further the worldwide goals of reducing global warming and promoting energy security. Continue award-winning progress towards reducing emissions of greenhouse gases and minimizing the environmental impact of manufacturing.

Promote energy efficiency: Continue advances in the energy efficiency-enabling functions of semiconductors that are deployed in a wide and growing range of products and that offer vital benefits in reducing energy consumption throughout society. Promote adoption of energy efficient goods by supporting the Environmental Goods Agreement currently under negotiation among World Trade Organization members.

Public Safety and Health

Protect consumers from dangerous counterfeits: Combat the spread of counterfeit semiconductors, which endanger the health, safety and security of consumers.

Employee safety: Maintain a safe and healthy working environment for industry employees.

Over the past 20 years, the global semiconductor industry has experienced remarkable growth and technological advancement, as demonstrated by the fact sheet below. These advances have changed the way we work, create, connect, and live. The next 20 years has the promise of even greater innovation, with semiconductors driving advances in the Internet of Things, autonomous vehicles, connected homes, smart cities, more efficient energy, wearables, mobile communication, human health, and more. To ensure that the world continues to reap the benefits of innovative solutions to society's grand challenges, the WSC will continue to work with its governments and authorities to establish a vibrant global policy and innovation ecosystem for semiconductors.

20 Years of Advancements in Semiconductor Technologies
Fact Sheet

Semiconductor Growth Metric	1996	2016*	Percent Change
Total IC Trade *Source: UN Comtrade*	$294 billion	$1 trillion	240%
Size of Global Semiconductor Market *Source: WSTS*	$132 billion	$341 billion	155%
Total Number of Semiconductor Units Produced *Source: WSTS*	215 billion	787 billion	266%
Number of Transistors Produced (estimate) *Source: SIA in US Factbook*	29.1 quadrillion (29,100,000,000,000, 000)	124 sextillion (124,000,000,000, 000,000,000)	426,017%
Average Number of Transistors per Semiconductor *Source: SIA in US Factbook & WSTS*	135, 237	157, 512, 618	116,371%
Microprocessor Speeds *Source: IC Insights, McClean Report 2015*	133 MHz Single Core	3,500 MHz Quad Core	10,426%
Energy Efficiency of Computing (MIPS/watt) *Source: IC Insights, McClean Report 2015*	12 million instructions per second/watt	166 million instructions per second/watt	1,383%
Total worldwide IC wafer capacity (200 mm equivalents) *Source: IC Insights, McClean Report 2016*	51.9 million	204.7 million	294%
Worldwide semiconductor industry R&D spending *Source: IC Insights, McClean Report 2016*	$15.7 billion	$58.9 billion	275%
Process technology node reached *Source: IC Insights, McClean Report 2016*	350 nanometers (.35 microns)	10 nanometers	3,400%
Average value of semiconductor content per car *Source: IC Insights, McClean Report 2016*	$100 per car	$400 per car	300%
Cell phone subscriptions per 100 people *Source: World Bank*	3.022	104.97	3,374%
Internet users per 100 people *Source: World Bank, ITU*	1.19	43.4	3,547%

Note: Value amounts ($) expressed in US dollars.

*Estimates based on 2015 data