



DEVELOPMENT OF ASEAN FRAMEWORK FOR TRADE NEGOTIATIONS

ELECTRONICS INDUSTRY

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INTRODUCTION

The electronics industry today plays a vital and important role in the development of most nations as it has grown substantially and strongly over the past decades.

This industry moves closer to the center and drives of the rapid economic development of the world, staking its place in the heart of one country after another.



During the early years of the electronics industry, some of the world's top electronics companies, looking for ways to be more competitive, decided to set up their assembly plants in Asia, particularly in Association of Southeast East Asian Nations (ASEAN) countries where they found a large pool of highly skilled workers and where they could operate at a very competitive cost. Most of them were multinational companies based in North America, Europe and Japan.

The relocation proved to be good for these companies, so good that many of them now operate their largest assembly plants in ASEAN. Not only they maintained their operations in these countries, they have also expanded them as their markets grew.

With the entry of these large multinational companies, plus the set-up of homegrown companies in ASEAN, **the electronics industry in no time became the number one export industry of most ASEAN countries, particularly Singapore, Malaysia, Thailand and Philippines.** For so many years now, it has been these countries' top export products.

The ASEAN countries, through its initiative of ASEAN Free Trade Area, or AFTA, laid out a comprehensive program of regional tariff reduction, to be carried out in different phase years.

Over the course of the next several years, the program of tariff reductions was broadened and accelerated, and a host of "AFTA Plus" activities were initiated, including efforts to eliminate non-tariff barriers and quantitative restrictions, and harmonize customs nomenclature, valuation, and procedures, and develop common product certification standards.

In addition, ASEAN later signed framework agreements for the intra-regional liberalization of trade in services, and for regional Intellectual Property Rights (IPR) cooperation. An industrial complementation scheme designed to encourage intra-regional investment was approved, and discussions were held on creating a free investment area within the region. During the financial crisis of 1997-98, ASEAN reaffirmed its commitment to AFTA, and as part of a series of "bold measures," agreed that the original six AFTA signatories would accelerate many planned tariff cuts.

When the AFTA agreement was originally signed, ASEAN had six members (Brunei, Indonesia, Malaysia, Philippines, Singapore, and Thailand). Vietnam joined in 1995, Laos and Myanmar in 1997, and Cambodia in 1999. All four countries were required to sign on to the AFTA agreement in order to join ASEAN, but were given longer time frames in which to meet AFTA's tariff reduction obligations

As Regional Trade Agreements (RTA) now continue to proliferate as progress on the Doha Round has slowed, trade negotiations not only by ASEAN countries but also with three countries namely China, Japan and South Korea have allowed these countries to openly discuss trade barriers among neighbors and political allies, while retaining flexibility over which sectors to liberalize and which issues to negotiate.

This initiative reflects a trend of trade liberalization outside of traditional regional boundaries. The collapse of World Trade Organization (WTO) Conferences has underscored the difficulties inherent in that multilateral agreements and that many countries have focused on regional trade agreements as the primary means of opening up international trade.

This paper aims to focus on the ASEAN initiatives on the integration of the electronics industry in the region. It aims to provide information on the following:

- 1. Where We Have Been - The global and Asian electronics industry including the ASEAN region and its competitiveness.**
- 2. Where We Are Now - Implemented work programs including issues and concerns taken on the integration of the electronics industry in ASEAN and the private sector's cooperation.**
- 3. Where We Are Going - Strategic framework and actions to be taken by the electronics industry and the respective ASEAN government to effectively achieve electronics industry's regional integration.**

I. THE ASEAN ELECTRONICS INDUSTRY

THE GLOBAL AND ASIAN ELECTRONICS INDUSTRY

In 2005, the global electronics industry 's production amounted to US\$ 1.338 Trillion – the biggest among the entire world's manufacturing output.

As shown in Table 1, **Asia Pacific is the biggest among all regional electronics production centers**, accounting for 37% of the world's output. This followed by USA at 26%; Europe 21%; Japan 15%; and the rest of the world at 1%.

It also shows that global electronics industry has been growing at an average of 8.2% during the past 4 years. **Asia Pacific is also the fastest growing among all regions at 12.8%**, followed by Europe 9%; Japan 7.6%; and USA, at a slower growth rate of 2.5%.

Further, it can be noted that if we include Japan in the Asia Pacific's production output, it would total to US\$ 698 Billion (52%) or more than half of the global electronics production output. It makes Asia Pacific now as the electronics production center of the world.

GLOBAL ELECTRONICS INDUSTRY					
<ul style="list-style-type: none"> ASIA / PACIFIC ACCOUNTS FOR ALMOST 37% OF WORLD'S OUTPUT (> 50% IF INCLUDING JAPAN) 					
Electronics Production					
Region	2002 In US\$ Billion	2003 In US\$ Billion	2004 In US\$ Billion	2005 In US\$ Billion	CAGR
Europe	220.4	247.5	279.1	285.8	9.0%
Americas	317.6	314.1	334.3	341.9	2.5%
Japan	162.4	180.2	197.8	202.3	7.6%
Asia / Pacific	343.1	386.9	448.8	492.7	12.8%
Rest of World	13.2	14.3	15.7	16.2	7.2%
World	1,056.8	1,143.0	1,275.6	1,338.9	8.2%

Source: Reed Research, 11/2005

Table 1 – Global Production of Electronics Industry

The increasing share and high growth of electronics industry in the Asia Pacific is validated by the following Table, which shows that **the percentage of electronics production output has been moving gradually to low cost locations.**

More and more manufacturing companies located in high cost locations such as USA, Canada, Japan and Western has been migrating and setting up their production plants in Asia Pacific countries due to its lower cost of manufacturing advantage.

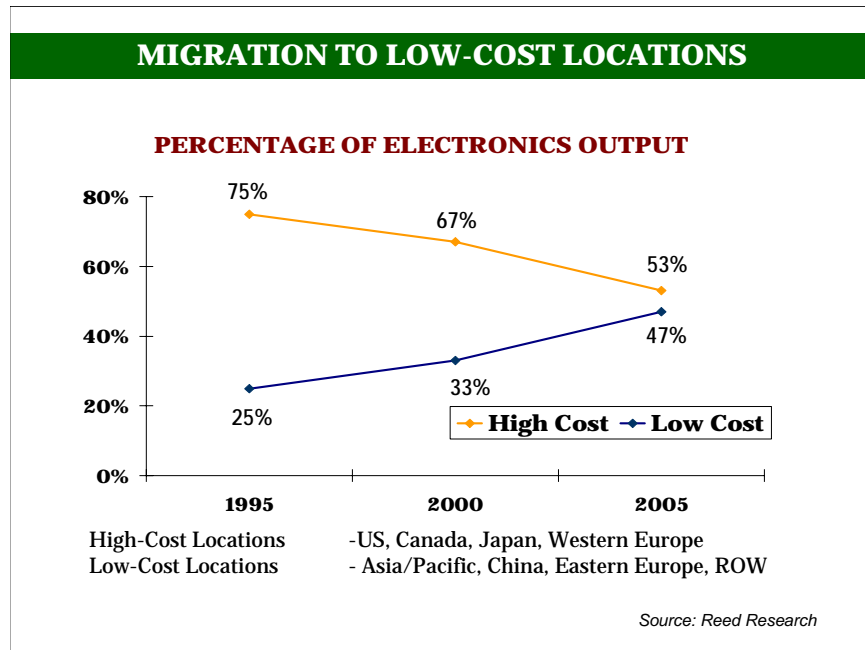


Table 2 – Migration of Production Centers to Low Cost Locations

Table 3 shows the major segments by product output. With the rapid technological advances, the rising trend on the usage of technology products and the phenomenal economic developments happening in Asia Pacific countries particularly in China, **networked communications comprise of communications, computer, and consumer electronics, now accounts for more than 2/3 of electronics products.**

The automotive electronics segment has likewise been increasing its share due to numerous electronics components and parts being incorporated as part of the vehicles. Industry reports say that electronics now accounts for around 30% of the cost of an automobile and will be more than half in future years. Electronics being used for military purposes has declined during the recent years.

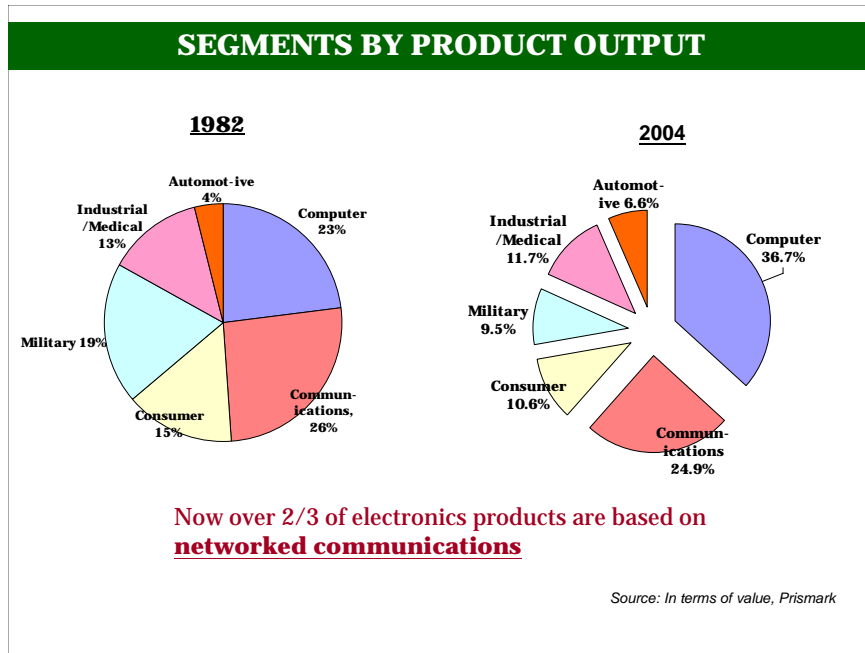


Table 3 – Industry Segments by Product Output

In terms of electronics components market size, Table 4 shows that major **Asian countries including Japan, now accounts for 62% of the total market.** Western countries accounts only for 38%.

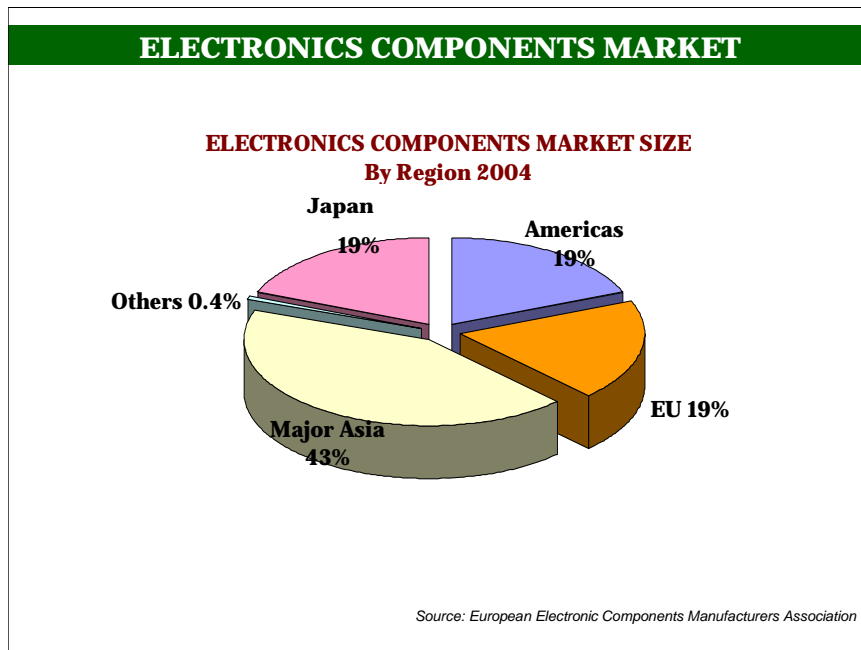


Table 4 – Electronics Components Market

During the recent years, **Asian countries have likewise penetrated the Electronics Manufacturing Services (EMS) business in the world** and is expected to reap 67% of the global EMS revenues in 2009.

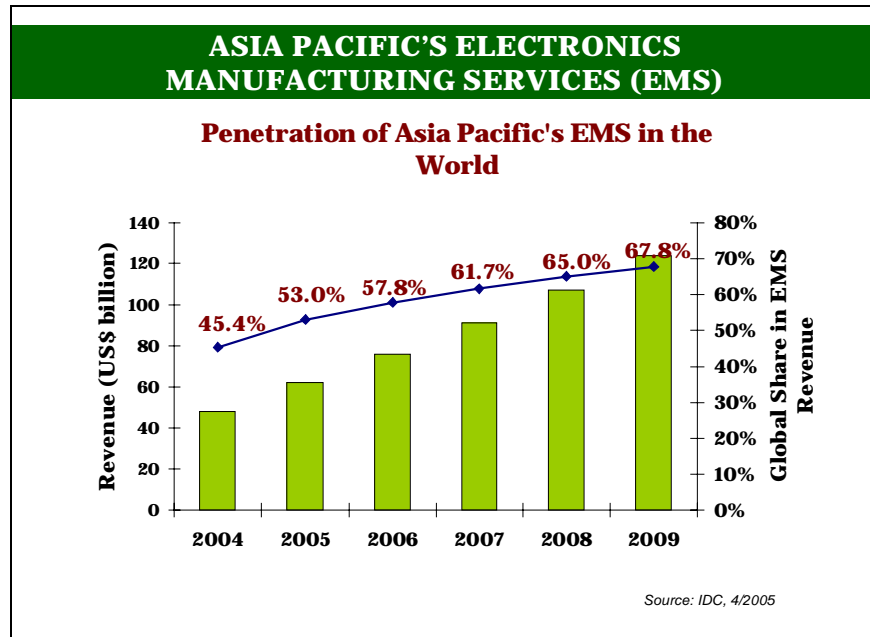


Table 5 – Asia-Pacific Electronics Manufacturing Services

Table 6 shows the application of semiconductors in different markets. Majority of the chips are used for computer applications at 42.6%, consumer electronics accounts for 18.5%; mobile communications at 16.3%; wired communications at 6.5%. Semiconductor use for automotive and military/industrial sectors accounts for 6.9% and 9.2%, respectively.

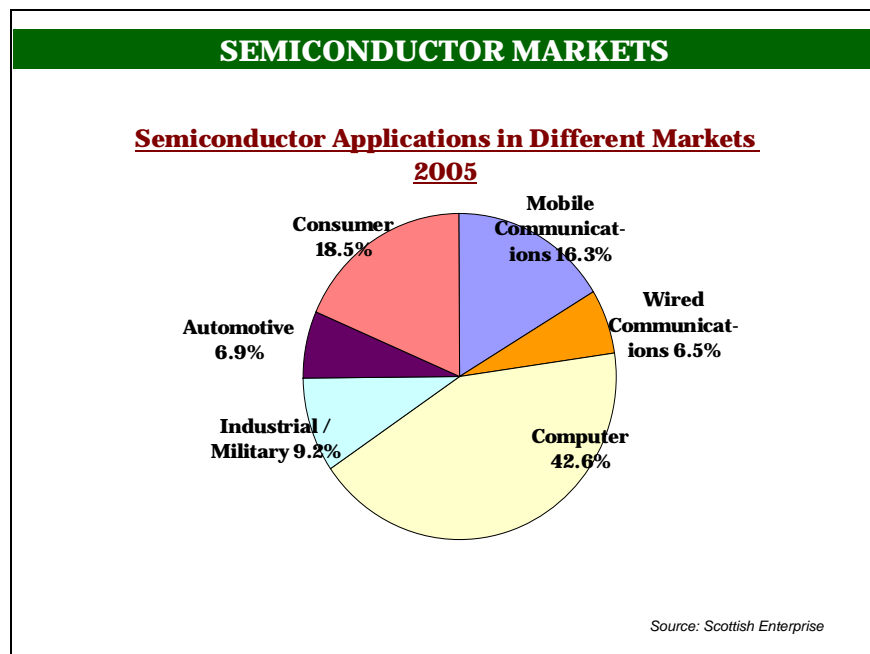


Table 6 – Semiconductor Applications in Different Markets

Asia's positions in semiconductor sales have likewise increased with Japan and China surpassing USA as major semiconductor market.

ASIA'S POSITION IN SEMICONDUCTOR SALES			
<ul style="list-style-type: none"> Japan and China are surpassing Americas as major semiconductor markets 			
Regional Semiconductor Sales (US\$ billion)			
Year	Americas	Japan	China
2001	31.9	26.7	9.9
2002	28.3	24.3	14.3
2003	29.0	29.6	20.0
2004	36.3	34.0	31.0
2005	33.0	33.1	34.3

Source: IC Insights, 3/2005

Table 7 – Asia's Position in Semiconductor Sales

The major growth drivers and trends in the electronics industry are:

1. Consumer Products - Flat panel TVs, High Definition TVs, iPods, digital cameras and set top boxes
2. Communication products - 3G handsets, TV reception on handsets, mobile services
3. Industrial electronics such as Radio Frequency Identification (RFID), green electronics, optical recognition
4. Electronics automotive products such as global positioning systems (GPS), hybrid car and electronics for safety purposes
5. Electronics use for casino gaming purposes will also be trendy.

Markets will be driven by automotive electronics (which is rising rapidly); computers and communications (which are still big), consumer and industrial (which is expected to rebound) and electronics products focused on high technology, multi-function, networking base, with high quality audio visual effects products and complex and high precision electronics.

There will likewise be an increase in spending brought by China and India markets, wireless services overtaking fixed line, offshore services, business process outsourcing, enterprise solution, security issue, commoditization of IT hardware, servers, Linux and digital home market and rising technologies.

The ASEAN Electronics Industry

With Asia's increasing share in the electronics production in the world, ASEAN's role has likewise increased.

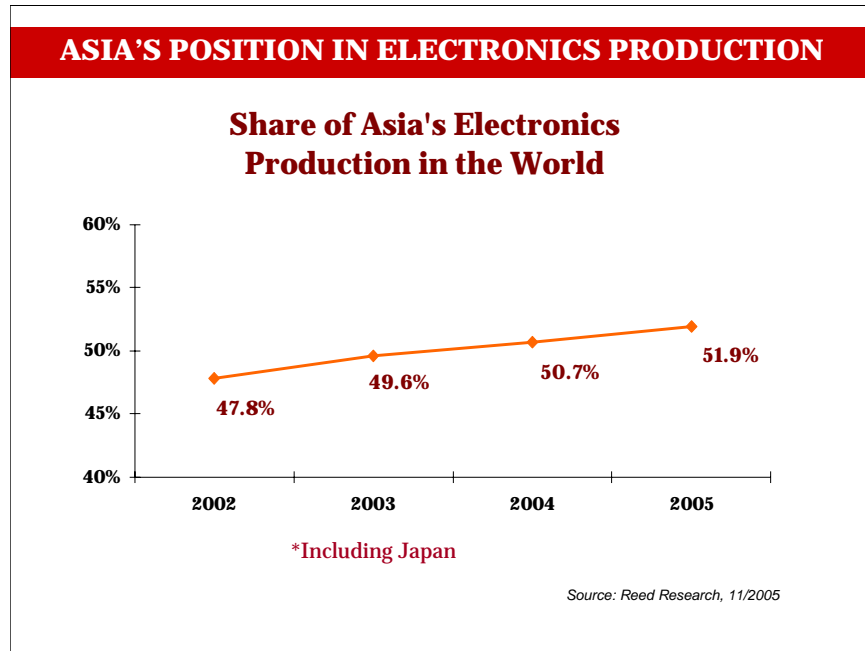


Table 7 – Asia's Position in Electronics Production

In 2005, the top 4 ASEAN countries have a production output of over US\$ 140 Billion. Malaysia ranks first, followed by Singapore, then Philippines and Thailand. Indonesia and Vietnam are also into electronics production business.

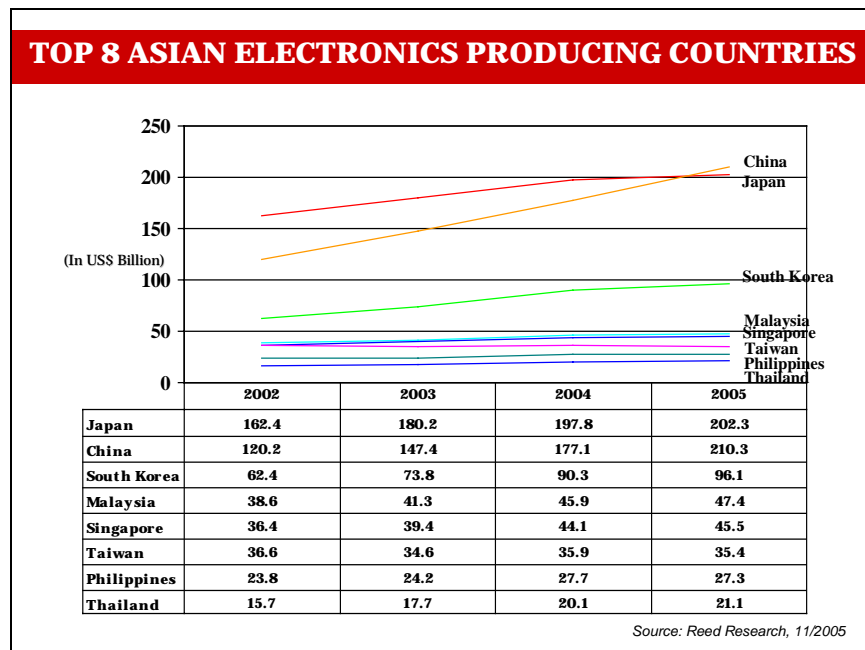


Table 8 – Top 8 Asian Electronics Producing Countries

The Philippine Electronics Industry

The Philippine electronics industry is the driver of the Philippine economy as it continues to be the number one export of the country for the past number of years.

In 2005, the electronics industry accounted for 2/3 or 66% of the total Philippine exports of merchandise goods. Revenue sales totaled US\$27.3 Billion growing at an average of 17% for the past 10 years. Semiconductor Manufacturing Services or SMS accounted for 74% while Electronics Manufacturing Services or EMS accounted for 26%.

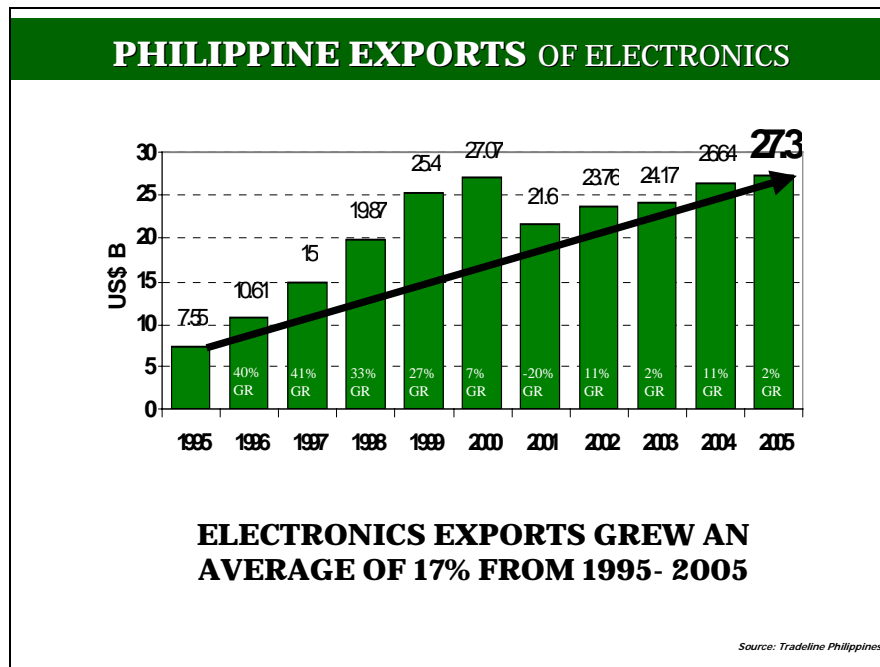


Table 9 – Historical Exports of Philippine Electronics Industry

Investments in the electronics industry have been growing for the past 2 years. In 2005, it increased by 75% - from US\$ 443 Million in 2004 to US\$776 Million.

In 2005, the industry directly employs over 400,000 engineers, technicians and operators and prides itself in enabling the transfer of the best global practices on high technology manufacturing to the Filipino worker. It likewise provides employment and livelihood indirectly to thousands more involved in the allied and support industries. As cited in the Economic Impact Study conducted by the UA&P/CRC, for every 1 direct job generated by the electronics industry, another 7 indirect jobs are created from allied and support industries.

INVESTMENTS IN THE ELECTRONICS INDUSTRY		
YEAR	INVESTMENTS	
1995	US\$	2.160 Billion
1996		1.080 Billion
1997		1.470 Billion
1998		670 Million
1999		790 Million
2000		1.240 Billion
2001		720 Million
2002		270 Million
2003		230 Million
2004		443 Million
2005		776 Million

Sources: Philippine Board of Investments (BOI) & Philippine Economic Zone Authority (PEZA)

Table 10 – Investments in Philippine Electronics Industry

Some notable developments in the industry, among others are the following:

1. As of 2005, there are a total of 883 companies who are into the electronics business, of which 72% are foreign owned.
2. Eight of the top chipmakers are operating in the Philippines namely TI, Intel, Philips, Fairchild, Analog Devices, Sanyo, On Semicon and Rohm
3. Four of the largest Hard Disk Drive producers are also in the Philippines
4. Cebu Mitsumi employs 17,000 people and is the biggest private sector employer.
5. Amkor employs 8,000 people for its IC packaging with 400 formats, from lead frame to BGA solutions.
6. Epson employs 5,000 and has the Philippines as one of the top 3 terminal printer production base of the global Epson Group, producing its 10 millionth printer recently.
7. Lexmark produces 40 million printheads per year
8. The industry also has homegrown SMS and EMS firms and a cluster of homegrown ODMs
9. Every year, the Philippine produces 72 million magnetic heads, 36 million DSPs, 30 Million HDDs, 11 Million LCDs and 8 million ODDS.
10. One Third (1/3) of its exports goes to the US and Europe and the other 2/3 to Japan, China and other parts of Asia
11. Likewise, there is a budding silicon design and development industry in the Philippines – from IC design to IC packaging, Module Design, Product Design and Firmware

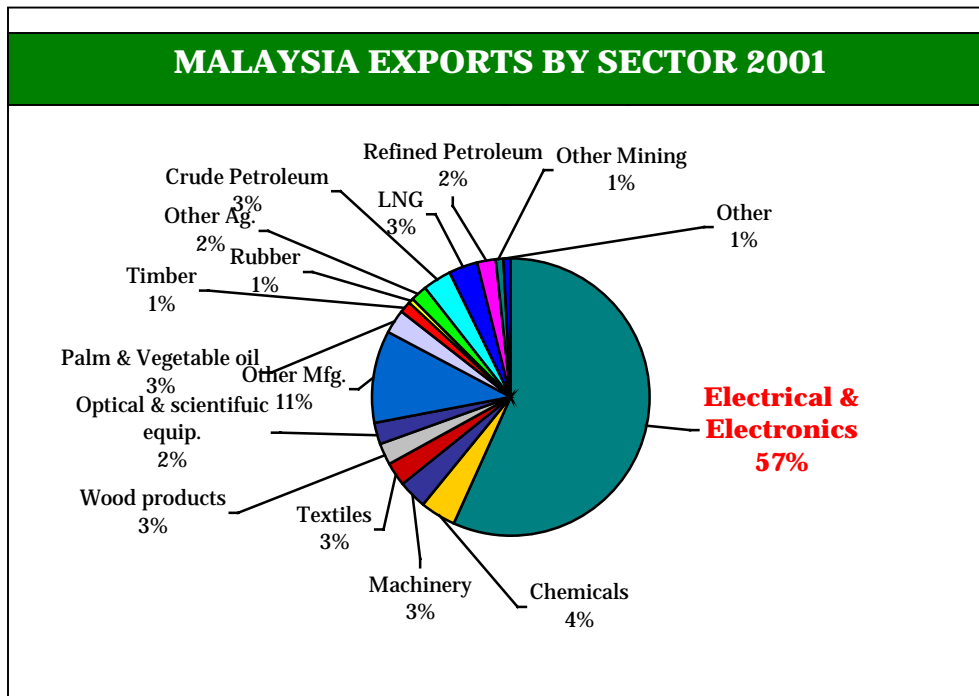
12. There is also a growing base of suppliers for Hard Disk Drives... supplying the world with 2 ½ million Hard Disk Drives per month
13. And there is a strong assembly, test and packaging design for semiconductor manufacturing service... from microprocessors to DSPs, logic devices, flash memory, opto and power devices, memory chips and analog devices... capturing 10% of the SMS world supply.

The Semiconductor and Electronics Industries in the Philippines, Inc. or SEIPI is the leading and largest organization of foreign and Filipino electronics companies in the country today. Established in 1984, the organization has grown with the industry it represents.

The Malaysia Electronics Industry

Malaysia’s economy is dependent on export growth. Manufactured electronics and electrical products represent the leading export sector, 57% of its total exports in 2001. Malaysia is the fourth largest semiconductor consumption market in the Asia-Pacific region. Emerging applications for computers, digital consumer video, and mobile communications are among the key growth opportunities.

Table 11 – Malaysia Exports By Sector



Birthered in the country in the early sixties, the sector today offers investors a ready pool of experienced managers, engineers and technicians who are capable of undertaking overall responsibilities and operating and maintaining equipment used in the manufacture and testing of products.

Investors can also take advantage of the available strong base of supporting industries that produce a wide range of electrical and electronic components and parts to back up the manufacture of end-products and equipment.

Besides components and parts, the industry has developed significant capacity and skills in the manufacture of a wide range of electrical appliances and electronic goods.

Today, Malaysia is a leading exporter of semiconductors and room air-conditioners, while the production of consumer and industrial electronics goods such as telecommunications equipment, computers and computer peripherals is expanding rapidly.

Malaysia has numerous back-end test and assembly operations, and large multinational companies' heavy investments have provided leverage into another high-tech industrial arena - wafer foundries. MIMOS Semiconductor, a government-owned fab, is the country's foremost provider of microelectronic products and services.

The recent explosive growth of wafer production will further enhance the country's expertise and provide it with clout as a global high-tech industrial player. MIMOS Semiconductor started designing chips immediately as it was set-up in 1984. But later realized that designing skills needed to be combined with manufacturing capabilities. MIMOS Semiconductor, currently, has two (2) foundries.

There are two (2) additional key advocates in the electronics industry in Malaysia - the Federation of Malaysian Manufacturer (FMM) and the Small and Medium Industries Development Corporation (SMIDEC).

The FMM is a federation of all sectors of manufacturers in Malaysia with over 1,800 members with the electronics sector having the largest representation with more than 400-members.

The Singapore Electronics Industry

The Singapore's semiconductor industry has grown from humble beginnings as an assembly- and test-subcontracting supplier to a fully integrated, cutting-edge technology wafer fabrication hub.

With about 13 state-of-the-art wafer fabs nationwide, the small island of Singapore is way ahead of its Southeast Asia neighbors in the development of the region's chip-making infrastructure. Semiconductors, as well as related production equipment and materials, are a key focus of the Singapore's Industry 21 initiative. An important advantage for investors is that the government is a significant shareholder in most of the island's wafer fabs.

With good physical infrastructure support, such as specialized power and water supplies, waste treatment and other ancillary services already in place, Singapore's Economic Development Board (EDB) is aggressively courting investments from both multinational corporations and local companies. It is offering incentives such as research and development funding and tax rebates.

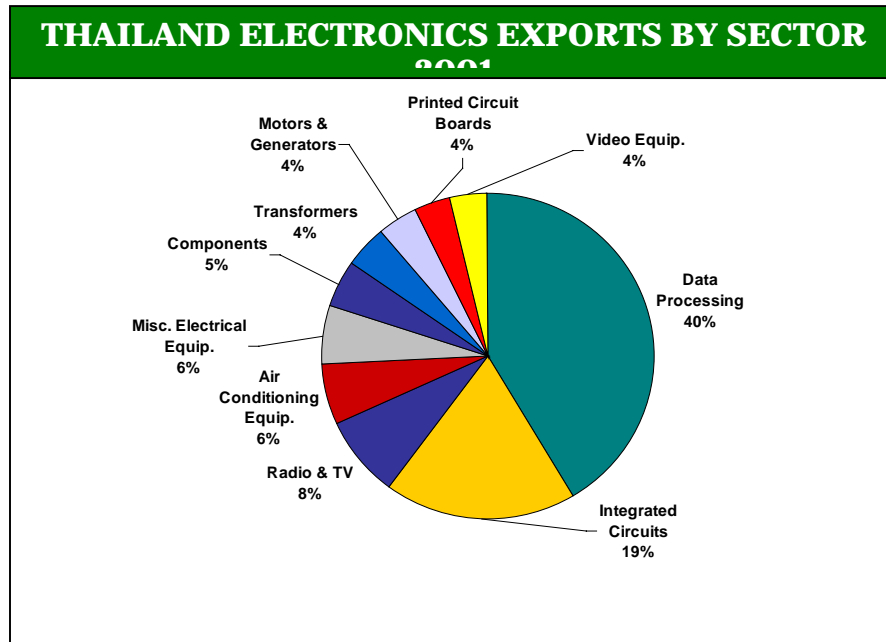
The key aspect of the "Silicon Valley concept" for Singapore is its ability to capture the entire value chain of semiconductor production. Industry-specific supporting facilities that have come on line include silicon wafer production, photo-masking and a high-purity hydrogen peroxide plant. The EDB reports that there are more than 40 semiconductor companies and 160 supporting organizations operating at all levels of the value chain. The Association of Electronics Industries of Singapore (AEIS) and the Singapore Manufacturers' Federation/EEAIIG are the two organizations working for the development of electronics industry in Singapore.

Most ASEAN countries are not in direct competition with Singapore, as Singapore has decided to target sectors with higher technologies, particularly wafer fab.

The Thailand Electronics Industry

Electronics is a growing but is small percent of Thailand's total export market. Electronic exports in 2001 were US\$16Billion, ~24% of the 2001 export total. But increasing inward flow of investments, US\$4.6 billion, in 2001, should increase the electronics export share substantially over the next few years. The major investors in Thailand are the Japanese and USA.

Data processing makes up ~40% of its electronics exports with IBM Storage, Seagate Technology and Fujitsu contributing ~12.5% of total electronics exports. The USA (~24%) is its number one export destination followed by Japan (~14%).



The Electrical and Electronics Institute is an independent organization that coordinates the activities of various agencies and institute to accelerate the development of electronics industry in Thailand. The government provides them an operating budget of ~US\$150k a year.

Thailand's competitiveness in the electronics industry is improving, as the government is proactive involved in the implementation of the industries road map and has allocated funds for key developmental projects.

With the foreign direct investments of electronics industry in Thailand recently, it is expected that Thailand's export value will grow rapidly.

The Indonesian Electronics Industry

Indonesia represents less than 1% of global electronics output and a similar share of the market. Its export revenue in the electronics industry is over US\$ 6 Billion.

In the past few decades and with huge number of population, consumer electronics dominates the industry in Indonesia. However, export orientation began in mid-1980s by some Japanese firms, but exports accelerated in the early 90s with more Japanese and Korean companies as dominant investors.

The Indonesian electronics now industry is primarily represented by the electronics components, accounting for the largest share of output, followed by consumer electronics and computing. In total the three segments accounted for 87% of output in 2002.

The Vietnam Electronics Industry

Vietnam is a latecomer in the electronics mainstream business of ASEAN. The electronics industry is still at the very infant stage of development with the government inviting as many foreign producers of parts and components as possible by introducing the combination of various tax incentives, improvement in business environment, and overseas promotion activities. The parts and components producers are in fact even more capital and technology-intensive than the assemblers

As it is young, the electronics industry is receiving high priority in the government's development strategy. The industry is the latest of Vietnam's successes in manufactured export development. With no exports until the mid 1990s, exports of electronics reached nearly US\$ 1.5 billion in 2005, up 34% as compared with the previous year.

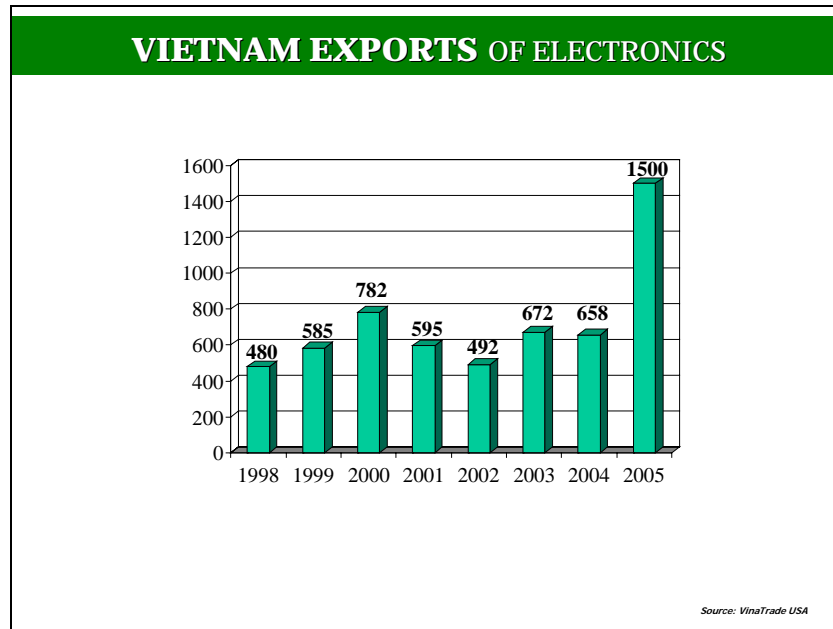


Table 13 – Vietnam Electronics Exports

The main products are transformers, printers, computer and mobile telephone parts, circuit boards, etc. The industry is dominated by foreign investments with some of the leading Japanese and Korean enterprises involved.

The Electronics Industry in Other ASEAN Countries

Brunei, Laos, Cambodia and Myanmar are not yet oriented towards generating more export revenue through electronics business activities as compared to the abovementioned six ASEAN countries. Hence, no sufficient industry data and information are available.

ASEAN's Electronics Capabilities

Production of electronics-based products has been growing in strength as a basis for industrial development in ASEAN. In fact, during the recent years, the electronics industry accounts for a big percentage share of most ASEAN countries' export revenues. **ASEAN accounts to a little over US\$ 150 Billion of the US\$ 1.3 Trillion global production output with intra-ASEAN electronics trade accounting for over US\$40 Billion.**

In general, in its present state, ASEAN electronics business is still essentially engaged into assembly and test manufacturing; most of its produce are geared towards exports; it has a growing allied and support industry; it is a high quality, high productive industry; it is still primarily dominated by multinational companies with Japan and the United States providing the much needed technology for ASEAN's economic development in electronics businesses.

The impact of the multinationals presence creates an opportunity for the ASEAN manpower to enhance its installed capacities and capabilities, growing proportionately with the growth of technology and size of the industry.

With the present size and visibility of ASEAN as a major industry group in the global electronics business, it is taking major steps to make it as an investment location of choice and regional center for excellence for technology companies who wish to design, make and sell their products.

II. THE INTEGRATION OF ELECTRONICS INDUSTRY IN ASEAN

During the ASEAN Economic Ministers (AEM) meeting held in Jakarta, Indonesia last 12-13 July 2003, the Ministers had an extensive discussion on how ASEAN can further enhance economic integration. There was a shared concern that industries that are no longer competitive in ASEAN would relocate themselves outside of ASEAN.

The Meeting considered the proposal for ASEAN to adopt a regional economic integration program to promote industrial complementarities in the region and give priority to integrating certain selected sectors.



For each sector, a member country had been identified as coordinator and are as follows:

1. **Electronics – Philippines**
2. Wood-Based Products – Indonesia
3. Automotive – Indonesia
4. Rubber-Based Products – Malaysia
5. Textiles and Apparels – Malaysia
6. Agro-Based Products – Myanmar
7. Fisheries – Myanmar
8. e-ASEAN – Singapore
9. Health Care – Singapore
10. Air Travel – Thailand
11. Tourism - Thailand

With the Philippines as the lead convener for the electronics sector, the Philippines, thru then DTI Secretary Mar Roxas, has tap the Semiconductor and Electronics Industries in the Philippines Inc. (SEIPI) and the Board of Investments (BOI) to champion the ASEAN Task Force.

Each country coordinator is then expected to convene a series of industry coordination sessions with the industry players of ASEAN for the identified sector to discuss how best the integration of these sectors could be accelerated in the region.

SEIPI and BOI were requested to organize and convene an ASEAN Electronics Forum to be attended by major ASEAN electronics industry players in order to:

1. Identify the difficulties being encountered in trading goods (products and inputs) within the region.
2. Come up with an ASEAN paper that will specify the trade facilitation measures needed by the electronics sector.
3. Devise a regional action plan for the electronics industry with the objective of enhancing economic integration of ASEAN so that third party investors and traders will view the entire region as a truly integrated platform in which to do electronics business.

The following focuses on the initiatives and implementation of work programs undertaken led by the Philippines, together with other ASEAN countries, with the private sector cooperation.

THE FIRST ASEAN ELECTRONICS FORUM (1ST AEF)

The 1st AEF was held in 28 August 2003 at Makati Shangri-La Hotel in Makati City, Philippines. Representatives from Indonesia, Malaysia, Singapore, Philippines and Thailand attended the Forum.

The objectives of the ASEAN Electronics Forum (AEF) were as follows:

1. To convene the major ASEAN private sector players in the electronics industry in order to identify the difficulties being encountered in trading goods (products and inputs) within the region.
2. To come up with an ASEAN paper that will specify the trade facilitation measures needed by the electronics sector.
3. To devise a regional action plan for the electronics industry with the objective of enhancing economic integration of ASEAN so that third party investors and traders will view the entire region as a truly integrated platform in which to do business in electronics.

The Consultation Process

Prior to the AEF, a survey questionnaire developed for the exercise was distributed to key industry players in ASEAN. There were 15 Philippines and two (2) Malaysian companies that responded to the survey.

Results were then consolidated by the Philippine Board of Investments (BOI) and presented by SEIPI during the Forum.

It was recognized that there is a need to improve turn around time of the region, as this is one advantage we still enjoy over China. Some of the trade facilitation issues include:

- 1. Simplification of customs procedures**
- 2. Harmonization of nomenclatures**
- 3. Standards and forms, and**
- 4. Improvement of shipment modalities.**

During the Forum, representatives from ASEAN countries have been asked to present industry status and developments of their corresponding electronics industries. It was noted that the aggregate electronics exports of Indonesia, Malaysia, Philippines, Singapore and Thailand in 2002 reached more than US\$ 140 billion. The ASEAN core competencies in the electronics value chain are spread out in different ASEAN member countries:

- 1. Indonesia: consumer electronic products**
- 2. Malaysia: consumer electronic products, semiconductors**
- 3. Philippines: semiconductors, electronic data processing**
- 4. Singapore: semiconductors, data storage, precision engineering**
- 5. Thailand: office equipment, consumer electronic products**

Agreements

In the discussions that ensued, issues in ASEAN, specifically in trade facilitation and economic integration were identified. For each of the issues identified, the Forum participants came up with four (4) major issues and assignments. These are:

- 1. Indonesia - Standards and Implementation of Mutual Recognition Agreement in ASEAN**
- 2. Thailand and Singapore -Strategy on China**
- 3. Malaysia - ASEAN Integration of Market and Production Base**
- 4. Philippines -Trade Facilitation**

THE SECOND ASEAN ELECTRONICS FORUM (2ND AEF)

The 2nd AEF Second was held on 9 December 2003 at the Baguio Country Club, Baguio City, Philippines. Delegates attended it from Indonesia, Malaysia, Singapore and the Philippines. Myanmar likewise went on board in this Forum, deciding to work with Indonesia on the issue of MRA and Standards.

For this Forum, entitled “Crafting a Regional Action Plan for the Electronics Industry”, the main objective was to come up with concrete, realistic and time-bound projects that can be pushed in order to move forward the electronics industry, which would be relevant to promoting trade, integrating the market and production base in electronics in and within ASEAN.

Among the agreements reached during this forum include:

- 1. Submission of inputs by each country on their assignments by end of February 2004.**
- 2. The body agreed that since the Regional Action Plan for Electronics Industry is still in the planning stage, participation of non-ASEAN entities to succeeding meetings shall not yet be allowed. Specific information on action plans shall neither be disseminated.**
- 3. The body likewise agreed to hold two (2) meetings next year, the first one to be scheduled between the 1st and 2nd quarter of 2004, which will still be hosted by the Philippines, being the country coordinator for ASEAN Electronics Priority Integration Program (PIP).**

THE THIRD ASEAN ELECTRONICS FORUM (3RD AEF)

The 3rd AEF was held in 25-26 March 2004 at the InterContinental Manila Hotel, Makati City, Philippines. It was attended by delegates from Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Singapore, Vietnam and the Philippines.

For this Forum, the main objective was to finalize the Roadmap for the ASEAN Electronics Integration that will be presented by then DTI Secretary Cesar Purisima during the ASEAN Economic Ministers (AEM) Retreat in Singapore scheduled in the third week of April 2004.

Among the salient points of the discussions during the forum include:

1. **On the product coverage of the roadmap** - There was an emerging consensus except nuclear reactors, and mechanical appliances and machineries as product coverage.
2. **On tariff elimination** - Timeline for ASEAN 6 was initially set to be in 2007. The Philippine DTI Secretary, however, will negotiate a 2005 timeline in the AEM Retreat Agreement.
3. **On trade facilitation measures** - Four measures specific to electronics will be pushed to enhance customs procedures across ASEAN. These are the:
 - 3.1 institutionalization of Rosettanet compatibility in ASEAN for the exchange of trade documents
 - 3.2 implementation of an Industry-specific Bonded Warehouse or a similar scheme
 - 3.3 implementation of a 24x7 customs operations with no additional fees or charges
 - 3.4 implementation of a Green lane or a similar system for all CEPT electronics products
4. **On Investments** - The AEF will intensify regional investments promotion work by focusing on ASEAN's competitive advantage (one of which is the large manufacturing base in 5 countries and a long-established presence of MNCs) vis-à-vis other investment locations, negotiating for the elimination of the China VAT policy, and reduction of intra-ASEAN withholding taxes for incoming designs.
5. **On Market and Production Base Integration** – Outsourcing activities in and between ASEAN countries shall be strengthened by enhancing the AICO Scheme, establishing an intra-ASEAN linked Supplier Database system and holding of an annual Reverse Trade Fair.
6. **On Standards and Mutual Recognition Agreements** - AEF will endeavor a phased implementation of MRA to begin with 3 products, identification and adoption of relevant international standards as domestic national standards, and identification of accredited private testing laboratories and certification bodies in respective ASEAN member countries

7. **On capacity building** - AEF will endeavor to develop ASEAN R&D capabilities according to ASEAN taste by looking at possible ways to cooperate within ASEAN in terms of education, trainings on R&D and by looking at existing institutions/committees/working groups from which assistance on improving R&D capabilities. Collaborations on testing and accreditation shall likewise be explored.
8. **On ASEAN Branding** - AEF shall endeavor to develop an ASEAN product (one which will have all-ASEAN inputs) and undertake ASEAN branding for the region's products and activities.

The Roadmap for Electronics Integration, as with the other 10 sectors under the ASEAN Priority Integration Program (PIP) shall be transformed into legally binding commitments in the form of agreements, which will then be submitted for endorsement to the Leaders at the 10th ASEAN Summit in Vientiane, Lao PDR in November 2004.

The AEF likewise agreed to hold the 4th AEF in Yogyakarta, Indonesia either in the last week of September or first week of October 2004. While Indonesia will host the event, the Philippines remain to be the country coordinator and chair of the event. Secretariat support will likewise have to come from the Philippines.

THE FOURTH ASEAN ELECTRONICS FORUM (4TH AEF)

The 4th AEF was held on 12-13 October 2004 at Hotel Bumi Karsa, South Jakarta, Indonesia. It was attended by delegates from Cambodia, Indonesia, Myanmar, Singapore, Vietnam and the Philippines. Representative from the ASEAN Secretariat was also present during the forum.

The Forum's main objective was to discuss and make recommendations on the outstanding issues on the Roadmap arising from the last SEOM meeting held on 17-20 August 2004 at the ASEAN Secretariat, Jakarta, Indonesia.

Following are the recommendations made by the Forum. These will be strongly endorsed for consideration of SEOM in its upcoming meeting prior to the Leader's Summit in November 2004.

1. **On AEF after the Leader's Summit** - AEF shall continue to exist on a stocktaking capacity and shall meet at least once a year for stocktaking purposes. Moreover, AEF will make appropriate recommendations to SEOM regarding the implementation of the Roadmap.

In the event that the ASEAN Working Group will require inputs on certain issues, AEF, through the Country Coordinator, can be called upon to act as resource person/s with the Chairman designating who among the Member Country representatives can be called upon to handle the issue.

2. **On the deleted measures from the 3rd AEF Roadmap version.** The following measures will not be pursued as agreed in SEOM:

- 2.1 Implementation of industry-specific bonded warehouses or similar schemes
- 2.2 Work towards reduction of intra-ASEAN withholding taxes for incoming designs
- 2.3 Develop ASEAN brand and ASEAN product

The implementation of 24 x 7 Customs operation with no additional fees or charges which was also deleted by SEOM will be recommended for reconsideration of ECCM, specifically with respect to the 24 x 7 Customs operation. On the imposition of additional charges, however, the Member countries will have to decide individually on the matter.

3. **On Outstanding Measures Under the Roadmap** - The linking up of existing individual databases shall be undertaken by CCI. In collaboration with AEF, it will prepare template/format of database that shall be followed by Member countries in developing their databases.

The holding of regular Reverse Trade/Parts Exhibition shall be handled by CCI. It will determine the frequency of holding the event and how these are to be done.

The development and promotion of ASEAN Center of Excellence (COEs) in the areas of R&D, design & prototyping, and outsourcing from within ASEAN shall be handled by WGIC. By December 2005, the WGIC shall have identified Center of Excellence in ASEAN including areas of expertise and satellite COEs within the region. The AEF will assist WGIC in the preparation of the Terms of Reference (TOR) for the establishment of COEs upon consultation with Member countries and will provide information on virtual COE when warranted.

WGIC will make appropriate recommendation on the development of skills training programs for countries with less-developed electronics industry. The CLMV countries will provide inputs and recommendations on the matter.

4. On Other Issues:

- 4.1 **ASEAN-Japan/ASEAN-China Next Steps** - Based on ASEAN-Japan CEP Workshop Seminar on FDI held in Tokyo on 28-30 September 2004, it was noted that the Japanese FDI will concentrate on electronics and automotive sectors and that the Japanese intends to integrate ASEAN electronics with China. In consideration of the foregoing, the AEF strongly recommends the following measures:
- a. CCI to stock take the competitive advantage of ASEAN with respect to the various sectors within the value chain of electronics;
 - b. CCI to emphasize capacity building as a competitive measure under the ASEAN-Japan CEP;
 - c. CCI to take the cluster approach for the electronics sector similar to the model made for the automotive sector;
 - d. As an initial step, CCI thru ABAC, shall arrange meetings with MNCs with operations in ASEAN to determine the appropriate manufacturing/service structure in ASEAN in line with their global business strategies; CCI then to make appropriate recommendations to AIA Council
- 4.2 **FDIs from other ASEAN and Plus 3 Countries** - CCI will recommend measures on how to encourage more FDIs intra-ASEAN and to ASEAN from Plus 3 countries.
- 4.3 **Differing Levels of Exclusions for Tariff Elimination** - Member countries will be enjoined to have no exclusions for electronics. If this is not feasible, they will be requested to keep the exclusion lists to the barest minimum and as common as possible.
- 4.4 **Participation of Non-ASEAN Countries in AEF** - Non-ASEAN countries with interest in the electronics sector in ASEAN may be invited to participate in future AEF meetings as warranted.
- 4.5 **AICO Scheme** - It is recommended that more AICO arrangements for the sector be encouraged and the approval of all AICO applications be fast tracked.

The above recommendations have been forwarded to the Philippine SEOM Leader for consideration in SEOM's meeting on 21 October 2004.

THE FIFTH ASEAN ELECTRONICS FORUM (5TH AEF)

The 5th AEF was held on 04-05 August 2005 at Plantation Bay, Cebu, Philippines. It was attended by delegates from Indonesia, Lao PDR, Malaysia, Singapore, and the Philippines. Representatives from the Philippine SEOM, ASEAN Secretariat and ASEAN CCI were also present during the Forum.

The Forum's main objective was to discuss the overall plans and strategies to ensure that the Roadmap measures, both horizontal and specific, for the Electronics Integration will be acted upon accordingly. The Forum also tackled updates/status on ASEAN PIP, COPS meeting and developments on integration measures from each country representative.

During the Forum, each country representative was designated to work on the following Roadmap measures/outstanding issues to discuss possible recommendations/ actions steps that AEF could take to ensure proper implementation of said measures.

- 1. Indonesia:** NTMs, Standards & Conformance, Standards & MRA
- 2. Lao PDR:** ASEAN Integration System of Preferences
- 3. Malaysia:** Outsourcing and Industrial Complementation, Market and Production Base Integration
- 4. Philippines:** Tariff Elimination, Rules of Origin, Customs Procedure, Trade and Investment Promotion, Human Resource Development, Customs Procedure, Capacity Building, AEF Structure and Participation
- 5. Singapore:** Investments (Horizontal), Intellectual Property Rights, Investments (Sector Specific)
- 6. Thailand:** Logistics Services, Intra-ASEAN Trade and Investment Statistics
- 7. Vietnam:** Movement of Business Persons, Skilled Labor, Talents and Professionals, Facilitation of Travel in ASEAN

It was likewise agreed that each country representative, designated to work on the action steps/outstanding issues of the Roadmap measures, will submit the required study / findings / recommendations to the AEF Secretariat by the end of September 2005 for consolidation.

Following are the outstanding issues and the respective action steps agreed upon to ensure proper monitoring and implementation of the electronics roadmap measures, both horizontal and specific. The recommended actions steps was forwarded to the Philippine SEOM Leader to strongly endorse the same to all other SEOM leaders in their meeting in August 2005.

HORIZONTAL MEASURES:

1. **On Tariff Elimination:**

- 1.1 It was agreed, in principle, that the Temporary Exclusion List (TEL) and Sensitive List (SL) shall be eliminated by 2006/2007, respectively. For security reasons, however, those in the SL can be transferred to the general exception list.
- 1.2 For the phased-in products, it was likewise agreed to have 0% tariff by 2010 and 0-5% tariff range from 2007-2009.
- 1.3 Designated Country Representatives shall validate the commitment of their respective countries by end of September 2005
- 1.4 AEF Secretariat to follow up commitments of all ASEAN member countries

2. **Non-tariff Measures (NTMs)**

- 2.1 AEF to work on the removal of all NTMs for electronics sector by 2007
- 2.2 Indonesia to do a study, with analysis and recommendation, on how to eliminate NTMs by end of September 2005
- 2.3 ASEAN Secretariat/RP BITR to give Indonesia all the list of NTMs for electronics by mid August 2005

3. **Rules of Origin (ROO)**

- 3.1 AEF is amenable to the adoption of 40% ASEAN content based on cumulation method to qualify for ROO and recommend its early implementation by all ASEAN member countries. This method has been adopted by the Ministers but is still subject to full implementation.
- 3.2 AEF is considering using substantial transformation as another ROO option in view of the fact that other countries have difficulty meeting the 40% ASEAN content.
- 3.3 RP to provide specific recommendations on the matter, including a proposal on the qualification for substantial transformation as an alternative ROO e.g. change in tariff classification, or adopt what is being used in WTO

4. **Customs Procedure**

- 4.1 It was reported that integration measures under Customs Procedures are on track. However, not all ASEAN member countries are already in compliance with said implementation measures, i.e., only the ASEAN 5 have complied with measure #10, while Indonesia, Malaysia, Philippines and Singapore have already been implementing Green Lane (GL) for electronics, etc.

- 4.2 RP was tasked to 1) follow up status of GL on Thailand and CLMV, 2) write to Brunei to seek clarification why it has not yet complied with Agreement on Customs Valuation and 3) validate with CLMV countries, being non-WTO members, whether they have already adopted the same following the WTO agreement, and 4) follow up the status on the adoption of service commitment (service charter) by ASEAN customs authorities
- 4.3 Indonesia, Philippines, Malaysia and Singapore, in principle, agreed to fast track the implementation of ASEAN Single Window (ASW) and not wait for 2011. RP customs was tasked to study and recommend specific measures on the matter, especially on how to fast track implementation of ASW for electronics by end of September.

5. Standards and Conformance

- 5.1 AEF proposed all ASEAN countries to recognize test reports and certificates issued by the seven accredited testing laboratories and the lone certification body, provided that there is a bilateral MOU between the countries (exporting and importing countries)
- 5.2 Indonesia was tasked to provide recommendation on the subject matter by end of September

6. Logistics Services

- 6.1 AEF Secretariat or Philippine SEOM to inform Thailand counterpart that it was chosen to take on the responsibility to review the status of the measures on logistics services and for them to provide specific recommendations to fast track integration measures on this area by end of September. In case Thailand is not amenable to this, Singapore has been chosen as the alternate to work on this measure.

7. Outsourcing and Industrial Complementation

- 7.1 Malaysia to formulate a strategy on how to enhance outsourcing activities within ASEAN by end of September e.g. provision of incentives especially on R&D, promote investments in low-value electronics products to CLMV, provided that a conducive investment environment are present in these areas, etc.

8. ASEAN Integration System of Preference (AISP)

- 8.1 Lao PDR to consolidate CLMV wish list on electronics products to be granted the AISP privileges by end of September

- 9. Trade and Investment Promotion**
- 9.1 Push for the holding of Regional Reverse Trade Fair involving industry associations of electronics products of various ASEAN member countries. The Philippines will be hosting the ASEAN Reverse Trade Fair 2006 in Manila
 - 9.2 For ASEAN to push for joint investment promotion efforts among its member countries. Japan, US, Taiwan and Korea are among the identified significant country partners in electronics sector for possible sources of FDIs for the region
 - 9.3 Tap the ASEAN Business Advisory Council (ABAC) for the ASEAN joint investment promotion efforts
- 10. Intra-ASEAN Trade and Investment Statistics**
- 10.1 To request Thailand to get a direct link with CCCA, which is the ASEAN working group on statistics
- 11. Intellectual Property Rights (IPR)**
- 11.1 Singapore to provide updates on the matter and recommend measures, taking into consideration the measures already undertaken by the ASEAN Working Group on IPR
- 12. Movement of Business Persons, Skilled Labor, Talents and Professionals**
- 12.1 Vietnam to look into ASEAN countries' visa policy to ensure that there is free movement of natural persons within ASEAN, specifically Lao PDR's and Myanmar's Visa policy for traveling businessmen/government officials from ASEAN using regular passport
 - 12.2 AEF was amenable to adapting the provision of visa exemption for experts from non-ASEAN countries. ASEAN member countries will have to work with their respective Ministry of Foreign Affairs regarding its implementation.
 - 12.3 Vietnam to consolidate ASEAN country positions and provide updates to the AEF Secretariat by end of September 2005
- 13. Facilitation of Travel in ASEAN**
- 13.1 In principle, AEF was amenable to harmonizing procedures for issuance of visas to international travelers.
 - 13.2 Vietnam to provide updates by end of September 2005.
- 14. Human Resource Development**
- 14.1 AEF to identify all training institutes in ASEAN focused on electronics trainings for engineers
 - 14.2 AEF to work on an agreement among institutions in ASEAN for sharing information, programs/ coursewares and trainers

- 14.3 Philippines to provide more detailed information on the above recommendations

SECTOR-SPECIFIC MEASURES

15. Customs Procedure

- 15.1 Rosettanet Asia, with the support of Rosettanet Philippines, to promote the establishment of a Rosettanet consortium in other ASEAN countries

16. Market & Production Base Integration

- 16.1 AEF endorsed the holding of the ASEAN Reverse Trade Fair 2006 in Manila
- 16.2 AEF agreed to make use of AICO scheme more frequently especially for products that are still in the SL and TEL to avail of 0% preferential tariff

17. Capacity Building

- 17.1 On Centers of Excellence (COEs), AEF to identify where an existing activity has achieved critical mass, and as such may be considered as starting point. There is a need to draw up the criteria to evaluate country status on existing COEs and consider the COE direction of non-ASEAN countries. There is likewise a need to ensure access to COEs. COE staffing can benefit from cross posting/staffing of industry professionals and academic researchers from and among ASEAN nationals.
- 17.2 On capacity building, in terms of product testing and accreditation, AEF to fast track EEE MRA in order to start the laboratory building activity. Otherwise only skills development maybe undertaken
- 17.3 On skills training programs, AEF to have an overall policy announcement from ASEAN governments that this is being encouraged. Industry associations of member countries to also come up with an implementation framework.

Aside from the Roadmap measures, there was also a discussion on the structure and involvement of the private sectors in the AEF. Following were the agreements made regarding the subject matter:

1. Private sector is considered an internal member of the AEF. The ASEAN Secretariat, SEOM and AEF government representatives are enjoined to ensure and encourage involvement of the private sector in AEF to carry out the integration of the electronics sector in ASEAN.
2. The succeeding AEFs will involve a meeting of ASEAN government representatives back to back with a meeting with the private sector

/industry associations of different countries in ASEAN. The AEF Secretariat will design the program that will actively involve the participation of the private sector for consultation/dialogue and/or industry presentation to the plenary body.

3. The Secretariat will try to schedule the convening of the AEF in time with the holding of international events such as the ASEAN Reverse Trade Fair (RTF) to optimize the use of resources (money and time) of participating private sector representatives.
4. The AEF will be held twice a year, instead of once a year, to appropriately undertake the tasks assigned to the AEF by SEOM for the integration of electronics and to provide more timely updates on the progress of implementation of the measures.

During the forum, it was also agreed that the 6th AEF will be convened in January or February 2006 in Thailand or Myanmar, depending on which country will accept to host the Forum. Likewise, the 7th AEF was agreed to be convened in June 2006 in Manila in time for the ASEAN Reverse Trade Fair 2006.

The above recommendations and actions steps were forwarded to the Philippine SEOM Leader to strongly endorse the same to other ASEAN SEOM leaders in their meeting in August 2005.

THE SIXTH ASEAN ELECTRONICS FORUM (6TH AEF)

The 6th AEF was attended by delegates from Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Singapore, Thailand and Philippines. Representatives from the ASEAN Chamber of Commerce, ASEAN Secretariat, as well as the ASEAN expert on electronics were also present during the Forum.

For this Forum, work was focused on three specific Roadmap measures, namely: (1) joint investments promotion work; (2) ASEAN Reverse Trade Fair; and (3) ASEAN electronics & allied industry database. These measures are being prioritized, as these are deemed critical in the development and integration of the electronics industry in the region.

Being the country coordinator for the integration of electronics in the region, the Philippines prepared the discussion paper/project proposal for each of the aforementioned priority roadmap measure.

These papers/project proposals were presented to AEF delegates prior to the workshop / break-out session, wherein details of these projects were discussed and agreed upon. Agreements on a per project group level were presented to the body during the Plenary, followed by the "Adoption of Proposals".

There was also a presentation from Intel Philippines on “Key Success Factors in Hosting an Electronics Manufacturing Firm in ASEAN Context” followed by an open forum as well as on the Proposed Seminar Series by EU under the Trans-Regional EU-ASEAN Trade Initiative (TREATI).

Following are the agreements reached during the Forum. These will be officially reported to ASEAN SEOM for endorsement to ASEAN Economic Ministers:

1. **Establishment of an ASEAN electronics and allied industries database following a harmonized template by March 2006**
2. **Holding of the ASEAN Electronics Business Opportunities Conference (AE-BOC) as the 1st ASEAN Reverse Trade Fair on June 27-29, 2006 in Manila**
3. **Coming up with an ASEAN Joint Investment Promo Collateral by June 2006**
4. **Convening of the CEO Forum of the top 5 MNCs and top 5 local ASEAN companies in time with the ASEAN Leaders’ Summit in December 2006**
5. **Preparation of the draft Terms of Reference for the proposed ASEAN Joint Investment Forum/Seminar by February 2006, which shall be presented during the 7th AEF.**

The AEF likewise agreed to hold the 7th AEF in Manila in June 2006 in time for the holding of AE-BOC.

THE SEVENTH ASEAN ELECTRONICS FORUM (7TH AEF)

The 7th AEF was attended by delegates from Cambodia, Indonesia, Lao PDR, Myanmar, Singapore, Thailand and Philippines. A representative from the ASEAN Secretariat, which is the ASEAN expert on electronics, was also present during the Forum.

For this Forum, work was focused on three specific Roadmap measures, namely:

1. **Regional Investment Promotions**
2. **ASEAN Electronics Industry Database**
3. **Customs Matters**

These measures are being prioritized, as these are deemed critical in the development and integration of the electronics industry in the region.

To update the participants on matters related to the AEF, the AEF Chair, reported the status of Priority Roadmap Measures, the updates on COPS II, as well as the results of the Jakarta Roadshow as well as the proposals for Electronics Integration phase.

Two speakers were also invited to share their knowledge/expertise on certain issues affecting the development and growth of the electronics industry. Mr. Seiichi Fukami, the President and CEO of Panasonic Manufacturing Philippines Corporation (PMPC), talked about the “Localization Project Through Regional Clustering”, while Mr. Hitoshi Ozaki, a consultant for the electronics sector from the ASEAN Secretariat, presented the “World Electronics Profile, ASEAN, and Direction Towards Integration”.

The three aforementioned Roadmap measures which are being focused on in this Forum were discussed during the workshop / break-out session, wherein details of these projects were agreed upon. Agreements on a per project group level were presented to the body during the Plenary, followed by the “Adoption of Proposals”.

Following are the agreements reached during the Forum:

1. Coming up with the design format and content of the ASEAN Joint Investment Promotion Collateral by end of July 2006
2. Linking of the databases of each country to each other’s website and ASEAN Secretariat website by July 2006
3. Submission of the status on the implementation of 24x7 Customs Procedures and Super Green Lane in the next ASEAN Electronics Forum in 2007.

The next AEF meeting was proposed to be held in Myanmar (May 2007) or Vietnam (late 2007). The AEF likewise agreed that if the official AEF Representative cannot attend the Forum, they have to find a replacement from the host country.

III. RECOMMENDED STRATEGIC FRAMEWORK AND ACTIONS

Following the implemented work programs in the past seven (7) ASEAN Electronics Forum (AEF) held from 2003 to 2006 and in its efforts to bring in more active ASEAN electronics private sector companies into the loop, the Philippines conducted a Roadshow/Visit to electronics companies based in Indonesia, Singapore, Malaysia, Thailand and Vietnam.

The Philippines made an environmental scan and downloaded the snapshot of the ASEAN electronics industry including the ASEAN Government's common goal of one ASEAN in the next coming years to concerned sectors within ASEAN.



With a need to increase, integrate, and facilitate business together to attain the ASEAN objective, **the ASEAN Electronics Business Opportunities Exhibition and Conference (AE-BOEC) was presented as an initial and concrete integration action plan of the electronics sector.**

AE-BOEC is an information dissemination and business development activity on outsourcing programs of electronics companies based in ASEAN countries and a display of products or a "Reverse Trade Fair" of companies who intend to source to ASEAN companies.

The concept of a meeting of the top electronics business leaders was also presented during the trip. These leaders would comprise of the top 5 Multinational Corporations based in each ASEAN countries and the top 5 homegrown electronics companies in ASEAN countries.

THE ASEAN ELECTRONICS BUSINESS OPPORTUNITIES EXHIBITION AND CONFERENCE (AE-BOEC) MODEL

THE BUSINESS OUTSOURCING CONFERENCE

A concrete action steps to realize the planned integration, the AE-BOEC was held on 07 December 2006, in time with the ASEAN Leaders Summit at Cebu City in the Philippines.

Eight (8) procurement executives from top ASEAN electronics companies discussed their respective companies purchasing programs and shared information on how the suppliers can participate and be accredited in the companies supplier programs.

All the conference presenters shared the historical background of their company and gave detailed accounts of their company background, products and services they produce to satisfy domestic and global demand. Within this framework, each conference speaker stated the diverse procurement policies and programs they are applying for such demand of consumers for electronics to further develop and satisfy these consumers' needs.

THE REVERSE TRADE FAIR

The Reverse Trade fair is an information and business development activity on outsourcing programs of electronics companies based in ASEAN countries or a display of products companies intend to source to ASEAN companies. A total of 20 ASEAN electronics companies/exhibitors participated in this Exhibition and was attended by more than 150 potential supplier-companies.

Initial annual purchase value of transaction from the Reverse Trade Fair when realized is Php240M or USD 5.0 M The above amount is the total reported value of purchase value from three (3) exhibitor companies only as other exhibitors did not indicate any projected purchase value from suppliers. Instead, they indicated contacts made with new suppliers and that negotiations need further discussions and follow-up activities such as sending of samples for analysis and testing need to be undertaken.

DTI/BOI reported that there were a total of 185 meetings with the 20 exhibitors and 6 investment promotion agencies of ASEAN that transpired, with an estimated average of 6 business matching meetings per exhibitor happening during AEBOEC. The Buyer-Exhibitors were generally satisfied with the quantity and quality of suppliers met.

AE-BOEC: THE NEXT STEPS

The Business Exhibition and Conference was able to bring ASEAN electronics companies in sync in the sharing of procurement program for the vision of integration. Such information (maybe confidential in nature) was shared unresistingly having in mind, ASEAN as one region not just a mere group of nations. Most significant results from AE-BOEC are the following:

- 1. Exchange of information between ASEAN buyers and sellers**
- 2. Creation and increase of new business contacts and partners**

With the satisfactory and positive remarks from the AE-BOEC attendees, **it is strongly suggested that another AE-BOEC be held** but with a few propositions such as staging the next AE-BOC to another ASEAN member state provide and provide a more aggressive promotional efforts to ensure bigger audience / attendees for the Conference.

THE ASIA-EUROPE MEETING (ASEM) MODEL

Some years back in mid-1990s, the Asia Europe Meeting (ASEM) hosted by France invited the **top five (5) companies in Asia and Europe to a business meeting in Paris.**

The objective was if these two regional blocs, Asia and Europe, intend to increase business together, they should create a venue where leading private sectors/business players in Asia and Europe would be able to get to know each other and they could discuss business proposals that would enhance business among themselves.

This ASEM meeting was attended by the CEOs of Sony and Toyota of Japan; Samsung and Hyundai of Korea, Mercedes Benz of Germany; Alcatel of France, among others.

The ASEM meeting, other than being able to achieve a meeting where top CEOs in Asia and Europe was able to exchange cards, was considered a success as **business partnerships were attained after the said meeting** as it has resulted to the joint venture partnerships between major European and Asian companies such Sony of Japan and Ericsson, Mercedes Benz of Germany and Ssangyong of Korea, among others.

ASEAN could make use of this ASEM initiative as a benchmark business model to achieve its integration purpose.

THE ASEAN ELECTRONICS BUSINESS LEADERS MEETING

Following the lead from ASEM business model, ASEAN could organize a networking and advocacy meeting of top five (5) Multinational Companies (MNCs) and top five (5) homegrown electronics companies in ASEAN countries focusing on discussions of issues and concerns that affects their respective business in doing business among companies based in ASEAN.

There should be a cohesive effort to bring together in one venue the heads of semiconductor and electronics companies in ASEAN.

To name a few, these could be the heads of the following stakeholder-companies based and operating in ASEAN, which could be influential in the realization of the electronics integration:

1. Philippines

MNCs

- 1.1 TI
- 1.2 Intel
- 1.3 Analog Devices
- 1.4 Fairchild Semiconductor
- 1.5 Philips
- 1.6 Amkor Technologies
- 1.7 Hitachi
- 1.8 Fujitsu
- 1.9 First Sumiden
- 1.10 On Semiconductor
- 1.11 Temic Automotive
- 1.12 Pricon

Homegrown Companies

- 1.13 IMI
- 1.14 Ionics
- 1.15 PSI Technologies
- 1.16 Fastech
- 1.17 Team Pacific

2. Singapore

IC Design

- 2.1 Infineon
- 2.2 Broadcom
- 2.3 NEC
- 2.4 Marvell
- 2.5 Media Tek
- 2.6 ComSOC

Wafer Fab

- 2.7 Chartered
- 2.8 SSMC (Philips-TSMC-EDBI JV)
- 2.9 UMCi
- 2.10 STMicroelectronics

Assembly and Test

- 2.11 ASE
- 2.12 Amkor
- 2.13 STATS-ChipPAC
- 2.14 AMD
- 2.15 Linear Technology
- 2.16 Micron
- 2.17 UTAC
- 2.18 Panasonic Semiconductors
- 2.19 Agere

Storage and Peripherals

- 2.20 Seagate
- 2.21 Hitachi Global Storage
- 2.22 Maxtor
- 2.23 Hoya
- 2.24 Showa Denko
- 2.25 HP
- 2.26 Seiko Epson

EMS

- 2.27 Solectron
- 2.28 Flextronics
- 2.29 Sanmina-SCI
- 2.30 Celestica
- 2.31 Venture Manufacturing
- 2.32 Jurong High Tech

Electronics Modules and Components

- 2.33 PCB/PCBA – 3M, Hitachi Chemical, Gul Technologies
- 2.34 Passive Components – Matsushita (Panasonic), Murata, EPCOS, CTS
- 2.35 Advanced Display – AFPD (Toshiba Matsushita Devices)

Consumer Electronics

- 2.36 Panasonic
- 2.37 Philips
- 2.38 Creative Technology
- 2.39 Infocom Products – HP, GES, Motorola, Allied Telesyn

3. Malaysia

- 3.1 Sapura Electronics Industries Sdn Bhd
- 3.2 Seksun Electronics Sdn Bhd
- 3.3 Ajv Electronic Devices (M) Sdn Bhd
- 3.4 Lemtronics Sdn Bhd
- 3.5 Asahi Best Base Sdn Bhd
- 3.6 Bims Sdn Bhd
- 3.7 Precision Auto Manufacturers Sdn Bhd
- 3.8 Precico Electronics Sdn Bhd
- 3.9 Allied Hori Sdn Bhd
- 3.10 Essp Sdn Bhd
- 3.11 Lion Electronics
- 3.12 Goda (M) Sdn Bhd
- 3.13 Kesp Sdn. Bhd.
- 3.14 A . S. T Automation
- 3.15 Dallab Inc Sdn Bhd
- 3.16 Khind-Mistral Industries Sdn Bhd
- 3.17 Penchem Industries Sdn Bhd
- 3.18 Ismail Mohamed Electrical Contractors Sb
- 3.19 Misme (M) Sdn Bhd
- 3.20 K-One Technology Sdn Bhd
- 3.21 Imex Services
- 3.22 Mareca Resources Sdn Bhd
- 3.23 V.S. Industry Berhad
- 3.24 Powerela Sdn Bhd
- 3.25 Upeca Equipment Manufacturing Sdn Bhd
- 3.26 Reliable Technology Sdn Bhd
- 3.27 Malaysian Electrical And Electronic Industry Group (MEEIG)
- 3.28 Malaysian National Computer Federation Confederation (MNCC)
- 3.29 Malaysian American Electronics Industry Association (MAEIA)
- 3.30 Persatuan Industri Komputer Dan Multimedia Malaysia (PIKOM)
- 3.31 The Electrical & Electronics Associations Of Malaysia (TEEAM)

4. Thailand

- 4.1 Cal-Comp Electronics (Thailand) Co., Ltd.
- 4.2 Century Electronics And Systems Co., Ltd.
- 4.3 Circuit Industries Co., Ltd.
- 4.4 Circuit Electronic Industries Public Co., Ltd.
- 4.5 Abb Limited
- 4.6 Advance Micro Tech Co., Ltd.
- 4.7 Anoma Electric (Thailand) Co., Ltd.
- 4.8 Asian Stanley International Co., Ltd.

- 4.9 Alpha Source Manufacturing Solution Public Co., Ltd.
- 4.10 Amd (Thailand) Ltd.
- 4.11 Bangkok Industrial Laminate Co., Ltd.
- 4.12 Bangkok Teapo Electronic Corp., Ltd.
- 4.13 Capetronic International (Thailand) Co., Ltd. (Public)
- 4.14 Ddk (Thailand) Ltd
- 4.15 Delta Electronics (Thailand) Ltd.
- 4.16 Draco Pcb Public Co., Ltd.
- 4.17 Elec & Eltek (Thailand) Ltd.
- 4.18 Electronics Industry (USA) Co., Ltd.
- 4.19 Fujikura (Thailand) Ltd.
- 4.20 Hoei Matsuyama Co., Ltd.
- 4.21 Hana Microelectronics Public Co., Ltd
- 4.22 Hansol Electronics (Thailand) Co., Ltd.
- 4.23 H R Seal Wire Electronics (Thailand) Co., Ltd.
- 4.24 Hipro Electronics Public Co., Ltd.
- 4.25 K.C.E. International Co., Ltd.
- 4.26 KV Electronic Assembly Co., Ltd.
- 4.27 Katolec (Thailand) Co., Ltd.
- 4.28 KCE Electronics Public Co., Ltd.
- 4.29 KSS Electroics (Thailand) Co., Ltd
- 4.30 Leonics Co., Ltd.
- 4.31 Ltec Ltd.
- 4.32 Lumphun Shindengen Co., Ltd
- 4.33 Magnecomp (Thailand) Co., Ltd.
- 4.34 Matsushita Electronic Components (Thailand) Co., Ltd
- 4.35 Merry Electronics (Thailand) Co., Ltd
- 4.36 Minebea Electronics (Thailand) Co., Ltd
- 4.37 Mizuki Electronics (Thailand) Co., Ltd
- 4.38 Mmc Electronics Thailand) Ltd
- 4.39 Murata Electronics (Thailand) Ltd
- 4.40 Nidec Electronics (Thailand) Co., Ltd
- 4.41 Noble Electronics (Thailand) Co., Ltd
- 4.42 Oki (Thailand) Co., Ltd
- 4.43 P.C.B. Center (Thailand) Co., Ltd
- 4.44 Pan International Electronics (Thailand) Co., Ltd
- 4.45 PCTT Ltd.
- 4.46 Philips Electronics (Thailand) Ltd
- 4.47 Pronec (Thailand) Co., Ltd.
- 4.48 Samsung Electro-Mechanics (Thailand) Co., Ltd
- 4.49 S.C.I. Electric Manufacturer Co., Ltd.
- 4.50 Seagate Technology (Thailand) Co., Ltd
- 4.51 Siam Electronics Assembly Co., Ltd.
- 4.52 Silicon Power Supply Co., Ltd.
- 4.53 Semiconductor Ventures International Public Co., Ltd
- 4.54 Star Microelectronics (Thailand) Co., Ltd
- 4.55 Summit Electronic Components Co., Ltd
- 4.56 Team Precision Co., Ltd. (Public)

- 4.57 Thai CRT Co., Ltd
- 4.58 Tse Lup Technology (Thailand) Ltd.
- 4.59 Wearnes Precision (Thailand) Ltd.

5. Indonesia

- 5.1 Ketua APKOMINDO
- 5.2 Ketua ASPILUKI
- 5.3 Ketua APJII
- 5.4 Ketua AINAKI
- 5.5 Ketua AIETI
- 5.6 Ketua ANIMA
- 5.7 Ketua APNATEL
- 5.8 PT. Inti Pisma
- 5.9 PT. Honoris Industry
- 5.10 Bogor Cyber Park
- 5.11 PT. Len Industri (Persero)
- 5.12 Cimahi Techno Residential Park

6. Vietnam

- 6.1 Vietnam Electronics and Informatics Corporation (VEIC)
- 6.2 Hanoi Electronics Corporation (HANEL)
- 6.3 Viettronics Dong Da Company
- 6.4 Vietnam Informatics Company (VIF)
- 6.5 Industrial Electronics Company (CDC)
- 6.6 Advanced Medical Engineering Company (AMEC)
- 6.7 Giang Vo Electronics Company (GVECO)
- 6.8 Computer Manufacturing and Service Company (CMS)
- 6.9 Computer Communication Corporation (CMC)
- 6.10 Vietnam Electronics & Refrigeration Technology Corporation (Mitsustar)
- 6.11 Thuan Quoc Control Equipment and Computer Company Limited
- 6.12 Minh Viet Joint-Stock Company
- 6.13 Hanoi Information Development Company (IDC)
- 6.14 Morning Star Electronics Corporation (MSC)
- 6.15 ELECO Electronics Company
- 6.16 Post and Telecommunication Equipment Company (POSTEF)
- 6.17 Vinh Trinh Co., Ltd
- 6.18 Electronics and IT Equipment Company (ECOM)
- 6.19 Telephone Equipment Company
- 6.20 VASC Software Company
- 6.21 High Performance Technology JSC (HiPT)
- 6.22 Broadcasting Development Company (BDC)
- 6.23 MITEC Joint-Stock Company
- 6.24 DTH Electronics Enterprise

- 6.25 Telecommunication Equipment and Material Import-Export Company (EMICO)
- 6.26 Financing and Technology Promoting Corporation (FPT)
- 6.27 Trung Minh Co., Ltd
- 6.28 Sieu Viet Co., Ltd (SIVICO)
- 6.29 Marine Electric and Electronic Machinery Company
- 6.30 Chi Anh Co., Ltd.
- 6.31 Trade and Industrial Development Joint-Stock Company (ITCOM)
- 6.32 Trieu Binh Tien Co., Ltd
- 6.33 VeGiang Company Limited (VEGA)
- 6.34 Technology Development Co., Ltd. (TDC)
- 6.35 Mechatronics Instrument Company
- 6.36 Vietnam Maritime Communication and Electronics Company (VISHIPEL)
- 6.37 Maritime Informatic and Technology Joint -Stock Company (MITECO)
- 6.38 Hai Phong Electronics Joint-Stock Company (HAPELEC)
- 6.39 Nghe An Electronics & ICT Company (NALECO)
- 6.40 Shipping Technology Company (STC)
- 6.41 Misa Joint-Stock Company
- 6.42 NIKKO Vietnam Joint-Stock Company
- 6.43 Minh Thanh Electronic Enterprise
- 6.44 Thai Nguyen Industrial Electronics Joint-Stock Company (VTQ)
- 6.45 Center for Manpower Training (CEMAT)
- 6.46 Hue Electronics Company (Huetronics)
- 6.47 TQT Electronics Company
- 6.48 Danang Electronics & IT Joint-Stock Company (Viettronimex Danang)
- 6.49 VIP Electronics Company
- 6.50 Danang Invesment Consulting and Technology Improving J.S.C (ICTI)
- 6.51 Tuong Nghiem Co., Ltd.
- 6.52 Light Service and Trading Co., Ltd
- 6.53 Ho Kha Trading Co., Ltd.
- 6.54 Viet Tuan Co., Ltd
- 6.55 Le Van Private Enterprise
- 6.56 Le Quang Chau Trading and Service Co., Ltd
- 6.57 Tam Thanh Company Limited
- 6.58 Thu Thanh Private Enterprise
- 6.59 ViettronicsTan Binh Company (VTB)
- 6.60 Viettronics Binh Hoa Company (VBH)
- 6.61 Viettronics Bien Hoa Joint-Stock Company (BELCO)
- 6.62 Genpacific Information Technology Company
- 6.63 Viettronics Thu Duc Company (VTD)
- 6.64 Viettronics Service Company (VESCO II)
- 6.65 Phu Tho Hoa Mechatronics Join-Stock Company

- 6.66 Viettronics Import-Export Company (Viettronimex)
 - 6.67 Tien Dat Electronics Corporation
 - 6.68 Thuan Thao Co., Ltd.
 - 6.69 FPT Elead Computer Company
 - 6.70 Saigon Electronics and IT Company
 - 6.71 Khai Tri Trading & Services Company
 - 6.72 Electrical and Electronic Manufacturing-Import-Export of District 10 (TIE)
 - 6.73 T&H Co., Ltd.
 - 6.74 Green Mekong Joint-Stock Company
 - 6.75 Vietnam Computer Joint-Stock Company (CMT)
 - 6.76 Electronics and IT Association of Ho Chi Minh City
 - 6.77 HAIHUY Electrical & Electronics Company
 - 6.78 Orion - Hanel CRT Co., Ltd
 - 6.79 Vina-Daesung Cable Joint-Venture Company
 - 6.80 VKX Trunk Equipment Joint-Venture Company
 - 6.81 Panasonic Home Appliances Vietnam Co.,Ltd (PHAV)
 - 6.82 SONY Vietnam Joint-Venture Company
 - 6.83 JVC Vietnam Joint-Venture Company
 - 6.84 Panasonic AVC Vietnam Joint-Venture Company
 - 6.85 Ekira Electrical and Electronics Company Limited
 - 6.86 Toshiba Vietnam Consumer Products Joint-Venture Company
 - 6.87 Cable & Accessories Manufacture Joint-Stock Company
7. Electronics companies in (if any) Brunei, Laos, Cambodia and Myanmar

SUMMARY

As a basic framework, the government should act as the Enabler and the industry as the Driver.

The ASEAN Governments should bring at least 5 Multinational Companies and 5 homegrown ASEAN companies in one table altogether to discuss matters that affect and that could enhance their business. Recommended approach would be as follows:

- 1. Identify Issues Common to Companies**
- 2. Identify Priorities to Companies**
- 3. Identify Applicable to what ASEAN has been discussing**
- 4. Consensus Gathering**
- 5. Define Value to Companies**
- 6. Conduct Meetings**

It is recommended to have an annual meeting of these industry leaders (the head of companies), for the next 3 years for networking purposes and focus group discussion on common

and priority issues and concerns that affects their business e.g. customs procedural issues, standards, travel/movement of people, etc., majority of which are all being discussed now in ASEAN Electronics Forum.

If the industry could present the outcome of these meetings to the heads of different ASEAN governments, preferably in time with future ASEAN Leaders Summit, the policy framework for the ASEAN integration and trade negotiations would be realized soon.