



# **ESIA Position**

## **EU - U.S.**

### **Transatlantic Trade and Investment Partnership (TTIP)**

#### **Introduction**

The European Semiconductor Industry Association (ESIA) is the voice of the Semiconductor Industry of Europe. Its mission is to represent and promote the common interests of the European-based semiconductor industry towards the European Institutions and stakeholders in order to ensure a sustainable business environment and foster its global competitiveness.

Semiconductors underpin a significant part of the European and worldwide economy. The global turnover of the semiconductor sector alone was around €230 billion in 2012 while the value of products comprising micro- and nano electronic components represents around € 1,250 billion. The impact of micro- and nano-electronics on the whole economy is estimated at 10% of the worldwide GDP.

The role of semiconductors will continue to grow as future products and services will become more digital and interlinked. The semiconductor industry provides the key enabling technology solutions for society in the fields of energy efficiency, mobility, health care, security and across the ICT sector including the realisation of the smart grid and more efficient lighting. Semiconductors are also the building blocks for better security, for the safety and efficiency of the whole transport systems and for environmental monitoring. No societal challenge can be successfully met without them.

The European Semiconductor industry was ranked as the most R&D intensive sector by the European Commission in 2011 and supports around 200,000 jobs directly and more than 1,000,000 indirect jobs in Europe. Europe is strong in electronics for the automotive sector (~34% of global production), for energy applications (~40%) and for industrial automation (~20%). Europe is also still strong in designing electronics for mobile telecommunications. European companies, including a large number of SMEs, are world leaders in high growth smart micro-systems like health implants and sensing technologies and low power consumption components.

ESIA works closely with the Semiconductor Industry Association in the US (SIA) through joint membership in the World Semiconductor Council (WSC). The WSC comprises the semiconductor industry associations in China, Chinese Taipei, U.S., Japan, Korea and the EU. In reply to proposals from the WSC, the Government/ Authorities Meeting on Semiconductors (GAMS), representing each of the six WSC regions, address sector related trade, regulatory, IPR, counterfeiting, environmental and other aspects.

*ESIA is an Industry Association of:*

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## **Key Message**

ESIA welcomes the decision to launch negotiations for a deep and comprehensive Transatlantic Trade and Investment Partnership. The importance of the two-way semiconductor trade to both the EU and the US leads ESIA to support bilateral trade and policy agreements that facilitate trade and the healthy growth of the industry, in line with the principles of fairness, respect for market principles, and consistency with WTO rules.

ESIA believes that through this negotiation, the EU and the US will have the opportunity not only to expand trade and investment across the Atlantic, but also to contribute to the development of global rules that can strengthen the multilateral trading system. In detail:

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### **1) Liberalization of Trade**

- **ITA and elimination of Tariffs**

The Information Technology Agreement (ITA) of 1996 grants duty free treatment for a large range of ITC products. However, the ITA has not been updated since conclusion despite rapid technology advances in the highly innovative ICT sector, in particular the semiconductor industry.

*Advanced semiconductor products such as Multi-component ICs (MCO) should be included in the scope of the TTIP in case the currently on-going negotiations for the ITA expansion are delayed or fail or do not cover all relevant products.*

- **Preferential Rules of Origin**

Preferential rules of origin which would need to be applied in a FTA between US and EU today differ markedly between US and EU. These rules need to be aligned.

*ESIA urges the EU to apply preferential rules of origin that are transparent, simple, minimize administrative burden, and that consider relevant aspects of the semiconductor industry (e.g. Front-end / diffusion for Semiconductor).*

- **Global Encryption Standards and Regulations**

The use of encryption has become more common and widespread in commercial ICT applications. Nearly all ICT products contain encryption to prevent data loss, ensure security, trust and integrity of data and allow for valuable commercial applications such as mobile payments, e-health, e-passports. The European semiconductor industry has a strong market position for information security related semiconductors with cryptographic capability - such as for example smart card ICs - in terms of security level offered and has a major interest in ensuring the right access to this growing market with strategically important developments such as the Internet of Things, Smart Grids and Cloud Computing. However, in some countries government policies impose unnecessary restrictions on the use of and trade in products containing encryption. Such restrictions may provide opportunities for implementation in a discriminatory manner. In fact, in some cases, encryption regulations become prescriptive technical mandates requiring domestic algorithms or products rather than being performance based and focusing on the level of security desired.

The WSC has developed and communicated over the last three years a solid set of encryption best practices to ensure the continued growth of the ICT industry, and the significant demand for and trade in semiconductors. The WSC Encryption Principles generally state that there should be no regulation of cryptographic capabilities in widely available products used in the domestic commercial market because mandating or favouring specific encryption technologies or products could reduce, not increase, security, also raise product costs, without allowing best products use. The WSC Encryption Principles strongly encourage the use of global or international standards, including normative algorithms, as essential to avoid fracturing the global digital infrastructure and creating unnecessary obstacles to trade. Because security functions are growing in global ICT products and applications, interoperability has become more critical and thus international security standards such as Common Criteria for Information Technology Security Evaluation will increase in importance.

The governments and authorities (GAMS) agreed to encouraging all GAMS members and governments in general to observe the Encryption Principles that the WSC has developed since 2009 and to which GAMS members have committed at their meeting in 2012. The GAMS acknowledged that the WSC Encryption Principles make it clear that in order to avoid negative impact on the industry's competitiveness, it is important to prevent unnecessary restrictions to trade, and that therefore, commercial products with cryptographic capabilities which are, or will be, widely available and deployed in the respective domestic markets should as a general matter not be regulated.

As recommended by the WSC, the GAMS also agreed to help ensure open global markets that are free from discrimination by encouraging the adoption of international voluntary standards and norms, including algorithms, as essential to avoid fracturing the global digital infrastructure and creating unnecessary obstacles to trade. In the limited circumstances where regulation may be necessary, the GAMS regions agreed to advocate for transparency and non-discrimination in any regulatory requirements, either in force or being developed concerning encryption in semiconductors used in domestic commercial markets, including the conformity assessment procedures used to demonstrate compliance with those requirements.

*ESIA recommends that EU and US governments should take common efforts to implement and promote, also within TTIP, open and free markets for commercially used products with encryption capabilities, which adhere to WSC principles and adopt international standards and best practices in their technical requirements, licensing and certification.*

- **Trade/Customs Facilitation**

Lack of harmonization and alignment of data elements in the customs area leads to increased administrative burden for economic operators who have to state different data due to different regulation in receiving region/country. This refers as well to different application or interpretation of the harmonized system of custom tariffs as also to different non-preferential rules of origin (e.g. monolithic IC's).

Further US regulation generally foresees mandatory marking and labelling of non-preferential origin on products, from which the semiconductor industry currently is exempted as its products are imported for use by the importer (use in manufacturing) and is not intended for sale in the form in which they were imported. In general it would be preferable that there is no rule for mandatory marking and labelling on the products as long as non-preferential rules of origin are not harmonized.

*ESIA recommends that the EU and US governments make progress at WTO and other fora towards Trade and Customs Facilitation principles and their implementation leading to reduced administrative burden and faster transit times in supply chain.*

- **Security of supply chain, Risk assessment**

The US and EU agreed on mutual recognition of their authorized economic operators schemes. The cooperation and recognition should be fully and swiftly implemented and should also include a common approach to risk assessment. Unilateral measures like “100% screening” should not be applied by either party.

- **Export Control**

Many semiconductor industry products and technologies - in particular those with cryptographic capabilities - are classified as dual-use. It concerns for example Integrated Circuits for smartcards which are widely used in a variety of commercial applications such as banking, transport, mobile communications, computer, set top boxes etc. The classification under dual-use implies the necessity of obtaining export licenses. The non-timely implementation of the latest dual use list into the EU legislation – due to slow EU decision making – may give EU dual-use exporters of semiconductors a competitive disadvantage over exporters from third countries with the risk that customers buy available non-EU products. A timely implementation of the latest control lists is paramount for a global level playing.

Contrary to other third countries like the US, there is hardly any “EU export-control system”. There are 27 single national systems and different policies between Member States, leading to a fragmented export control environment and lack of European level playing field. The lack of consistency, predictability, transparency and efficiency across the EU 27’s varying national licensing authorities amount to a distortion of the internal market, create additional administrative burdens with the risk that customers buy foreign available products.

In addition, the scope of EU General Export Authorisations (EUGEAs) is currently limited and ESIA would like to see additional EUGEAs implemented corresponding to at least all available UK and Germany National authorisations, and ideally corresponding to the widest scope of available authorisations currently existing in third countries. ESIA advocates additional EUGEAs for cryptography - equal to the US license exception – as well as for inter-company exports/transfers, especially on technology transfer for R&D purposes.

*ESIA recommends that the EU and US align and commonly develop their export control rules leading to less restriction and administrative burden*

- **Regional Stimulus Measures**

EISA and the WSC are of the opinion that government actions should be guided by market principles and should avoid adoption of protectionist or discriminatory measures. The competitiveness of companies and their products, not the interventions of governments and authorities, should be the principal determinant of industrial success and international trade, and assistance should be provided in a market-oriented fashion. This is especially important in times of economic downturn or unexpected economic upheaval. Stimulus measures that promote the adoption of information technology, green IT, energy savings, and support research and development in particular have the potential to foster growth and benefit society in the years to come.

*ESIA recommends that the EU and US governments should commit to measures that promote the competitiveness of companies and their products as the key determinant of industrial success and international trade.*

## **2) Corporate Responsibility**

- **Conflict Minerals**

The EU considers legislation to address increased societal concerns with the mining of certain minerals from the Democratic Republic of the Congo (DRC) and surrounding countries. ESIA and the global semiconductor industry share the deep concern about sources of minerals from these conflict zones and are committed to using conflict-free minerals.

Any new EU legislation should be harmonised with the US ‘Dodd Frank Wall Street Reform Act’, the OECD guidance and should consider the electronic industry developed tools designed to comply.

*ESIA recommends that the EU and US governments coordinate and harmonize approaches to compliance across geographies. Where regulations exist or are being developed, the EU should embrace global, industry-led initiatives to identify conflict-free smelters and promote common compliance tools, methods and standards.*

## **3) Protection of the Environment**

- **Emerging Consumer Product Regulations**

In achieving the proper balance between continued innovation and the protection of the environment and safety, ESIA is concerned that some emerging regulations may cause unnecessary restrictions on the industry’s ability to innovate, develop new and more efficient semiconductor technologies, and allow for the global distribution and use of finished semiconductors.

ESIA, alongside the global semiconductor industry is concerned specifically about the proposed regulation pending in California, the “Safer Consumer Products” proposal, which creates unnecessarily complex and burdensome product requirements which are not harmonized with existing international regulations and standards. This regulation, if finalized in its current form, would be unworkable to implement, fails to protect confidential business information and imposes barriers to global trade.

*ESIA recommends that EU and US governments within the context of TTIP voice these concerns to the State of California and request that the California regulatory authorities address the concerns raised by the semiconductor industry.*

- **Substance Regulations should consider exemptions where the risk is properly controlled**

ESIA underlines the key role that materials innovation, advancements in the use of chemicals, and emerging technologies have in achieving further technological progress in the semiconductor industry in producing technologies that provide numerous societal, environmental and economic benefits. In addition, the industry is committed to achieving the environmentally sound and safe use of materials, chemicals, and new technologies. ESIA would encourage

authorities to proceed carefully in regulating materials, chemicals, and new technologies in the highly innovative semiconductor industry. Such regulations should acknowledge the long-established practices in the industry relating to risk management and the use of enclosed manufacturing systems. ESIA is particularly concerned with the evolution of REACH.

ESIA would encourage that REACH does not restrict substances or limit access to substances in the EU for the manufacture of semiconductors in Europe only. Attention should be given by authorities to the granting exemptions under Art. 58 (2) of REACH for chemicals for specific industrial use in tightly controlled environments where the risk is properly controlled. ESIA would also recommend a more risk-based decision-making when proposing substances used by the semiconductor industry. Annex XV dossier proposals to add a substance to the SVHC list or to make a restriction proposal should take into account at an early stage if there are any risks to human health or to the environment associated with the specific semiconductor use of the substance.

*ESIA recommends the granting of use exceptions or categories of uses where substances are used in properly controlled environments*

- **Greenhouse Gases / EU F Gas Regulation**

The EU is adopting measures in the F gas regulation to phase down HFC compounds; ESIA believes that the phase-down of HFCs should exclude the use of HFCs as a process gas in the production of semiconductors.

ESIA is concerned that when governments adopt regulatory approaches to greenhouse gases, governments should recognize the European and global industry's longstanding responsible efforts to manage and reduce greenhouse gas emissions, the small quantities of these gases used in the semiconductor manufacturing process, and the essential nature of these gases in the manufacturing process. These materials are critical to the sector producing semiconductor devices as there are no proven substitutes.

*ESIA recommends that governments should consider carefully when adopting regulatory measures that these measures do not have a disproportionate impact on the semiconductor sector as against other industrial sectors where the use of substitutes for these gases is possible.*

#### **4) Protection of Intellectual Property Rights**

- **Non Practicing Entities**

The semiconductor business is highly IP intensive. Hardly any other industry has a similar level of R&D investment in comparison to sales revenue. The semiconductor industry generates a relatively large number of patents in comparison to its sales volume. Also, in a typical integrated circuit a large number of innovative ideas may be used, for example relating to manufacturing, circuitry and functionality. A typical integrated circuit incorporates hundreds, even thousands, of features, making it easier for a third-party to allege that some individual feature in the IC infringes a patent. In addition, the semiconductor industry has short development cycles, with several generations of products within the lifespan of a patent; as a consequence, many patents may be of relevance for a given integrated circuit device, and an exhaustive patent search is hardly feasible.

Non Practicing Entities (NPEs) are companies which use the patent system to collect royalties for inventions they do not intend to practice. This phenomenon has grown to a significant scale and today a number of companies have as a business model the sole accumulation of patents from various sources and granting royalty bearing licenses under these acquired patents. The

activities of the NPEs have become a significant fraction of patent exploitation. Regularly these impose a burden as matters of patent infringement and validity are not well established and the negotiation situation is asymmetric. Until today the large scale activities of NPEs have been mainly confined to the US, although several NPE companies are active in Europe or have announced the intention to extend activities to Europe.

The funds paid to NPEs do not contribute to innovation and accordingly, they act as a tax on innovation. Defending a case normally also requires significant time of senior R&D staff, which adds to costs and may result in additional delay regarding innovation and progress. Accordingly, ESIA believes that the activity of NPEs to the extent that alleged infringement is not well established a priori, is counterproductive for our business environment. Companies are created whose sole purpose is to buy and exploit patents. In addition, there is a lack of transparency around NPE ownership and investments. ESIA is concerned that these practices might lead to anti-competitive behaviour and effects. Namely certain companies would be excluded from the risk of assertion by large NPEs. ESIA takes the position that the freedom for inventors and creative companies to exploit their IPR in the way that fits best into their respective business strategy should not be restricted, and that NPEs are a part of the knowledge economy. However, as stated above, often the way NPEs operate is unbalanced and ESIA is of the opinion that the unbalance needs to be addressed.

*ESIA recommends that the EU and US governments provide for safeguards to maintain the balance between NPEs and operating companies. The creation and enforcement of patent infringement cases without real merit should be discouraged.*

- **Trade Secret Protection**

In the semiconductor industry, trade secrets represent core business assets; trade secret protection promotes competitiveness, private investment and innovation. Weak protection or misappropriation has the opposite effect, as well as critically detracts future revenue and profit. Theft of trade secrets is a growing problem, and current protections for this critical form of intellectual property through unfair competition law, employment law and other branches of law is often times inadequate. Additionally, many governments are developing an increasing number of overbroad certification systems and other regulatory schemes that require the unnecessary disclosure of trade secrets as a condition of market access. The risk that the required sensitive information will leak to domestic competitors is compounded by the reality that many governments have inadequate safeguards to protect such information, and some of those same governments desire increased technology transfer from developed to developing markets

*ESIA recommends that the EU and US governments develop comprehensive provisions that implement adequate procedures to protect trade secrets, strengthen trade secret enforcement, and require parties to justify the necessity of any disclosures of proprietary information as a condition of market access.*

- **Utility Models**

In addition to patents, utility models (UMs) provide a means for protecting technical innovations. Utility models are not examined before registration and provide a low-cost, low threshold form of protection. Several, but not all, countries have UM protection and the requirements to obtain and to enforce UMs may differ significantly. As UMs are normally not examined prior to registration the actual protection provided is uncertain till these are enforced in litigation. For the semiconductor industry this provides uncertainty which is undesirable and may lead to unjustified business risks and unnecessary costs for invalidation proceedings. To reduce

these uncertainties, ESIA is in favour of a certain level of harmonization as to UMs. In particular, UMs should cover only physical entities and should not extend to methods of manufacturing or using devices, while requirements as to novelty and inventive step need to be well established. Applications for UMs and patents for the same invention are undesirable as the certainty provided by patent examination should be definite. Available remedies, such as damages and injunctions should reflect the lack of examination. Finally ESIA takes the position that prior to enforcing a UM in litigation the validity is to be determined on expense of the owner.

*ESIA recommends that Utility Models are restricted to physical entities and are subject to well established criteria of novelty and inventive step; that validity is determined prior to litigation and that remedies take into account the absence of examination prior to registration; and that co-existence of UM and patent applications for the same inventions is not possible.*

- **License for Foreign Patent Filings**

Development teams are becoming more international, not only in collaborations between industry, universities and research institutes but also within the same company. It is not uncommon that groups in different countries collaborate in the same project and exchange information on a day to day basis. A number of countries do have laws that require patent applications for inventions made in that country to be filed first nationally, while filing abroad can only be done after permission is obtained. Although permission is usually granted based on the first filed patent application, this requirement causes additional costs and delay. This is especially burdensome if there are multiple inventors based in different countries or if the country where the invention is made is not among the countries where a patent is desired. In such cases a special procedure to obtain permission needs to be followed and patent filing is delayed, even if the invention is of a type that will not raise objections.

*ESIA recommends that only in the few cases where national security interests are concerned the applicant will be required to obtain permission to file corresponding patent applications abroad.*

- **Respecting Cross License Agreements in case of Bankruptcy**

Semiconductor firms on both sides of the Atlantic depend on cross-licensing agreements to protect their massive investments in research, development, and manufacturing from litigation arising from a web of interrelated semiconductor patents. By reducing risk, cross-licenses encourage investment in the development and production of new technologies that benefit the world.

Some countries allow the possibility for the bankruptcy trustee to request cancellation of the existing license agreement and either renegotiate the license agreement or sell the intellectual property to a buyer who in turn could seek a new license agreement. Under this rule, the licensee not only has to pay twice to license the same technology, but will be forced to pay far in excess of what the parties would have agreed to when the original cross-licensing agreement was reached because, at the time of design the innovator had a number of implementation options, but after the design is in production, switching to an alternative is more difficult. Ultimately these costs are borne by consumers in the form of higher prices or fewer products/technologies available.

Transatlantic trade is promoted by the certainty provided by respecting cross license agreements in bankruptcy. Allowing unilateral rejection of patent cross-licenses when one of the parties to

that license becomes insolvent leads to 1) unnecessary litigation, 2) requiring the licensee to pay twice to practice the patent, 3) added uncertainty to technology investment decisions and Trans-Atlantic technology partnerships, and 4) higher costs for consumers.

*ESIA recommends that under the TTIP Agreement, all parties harmonize on a rule preventing the unilateral rejection of patent cross-licenses when one of the parties to that license becomes insolvent.*

## **5) Anti-Counterfeiting**

- **Fighting the Proliferation of Semiconductor Counterfeits**

Semiconductor counterfeiting is a global issue which is increasingly affecting all parts of the world. Semiconductors are the “brains” behind an incredibly diverse range of end products and systems with “life, health, safety, and mission critical” applications, such as healthcare and medical equipment, national communication networks, emergency response systems, electric power grids (including nuclear and solar power generation systems), industrial and automation systems, and transportation systems and controls. Given the criticality of these end-use products and systems, counterfeit semiconductors pose risks to health and safety wherever they are used worldwide. In addition, counterfeits also result in the loss of intellectual property for the original manufacturer. The sale of counterfeits erodes sales of legitimate products and causes job losses and damage to world economies.

*ESIA recommends that EU and US governments commit to fighting the phenomenon of semiconductor counterfeiting, and intensify the implementation of IPR enforcement measures, including information sharing activities, aimed at combating the trafficking of counterfeit semiconductors.*

### **For further information, please contact:**

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