ITI Promoting Innovation Worldwide

ITI Comments on Implementation of Additional Export Controls: Certain Advanced Computing Items; Supercomputer and Semiconductor End Use

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About ITI

The Information Technology Industry Council (ITI) is a global trade association representing 80 of the world's leading information and communications technology (ICT) companies. ITI's membership comprises global innovators from all corners of the technology sector, including hardware, software, digital services, semiconductors, network equipment, and platforms, as well as "technology-enabled" companies that rely on ICT to evolve their businesses. ITI engages policymakers around the world to promote innovation, security and sustained economic opportunity.

ITI appreciates the opportunity to comment on the October 17 rules updating export controls related to advanced semiconductors and manufacturing equipment. We recognize and support the U.S. government's prerogative to protect national security, and we welcome the opportunity to help inform the Bureau of Industry & Security's (BIS) approach. ITI and our member companies remain committed to providing constructive input to enable the U.S. government to achieve its security objectives while not unduly encumbering innovation and competitiveness that directly support U.S. security and economic goals.

Initial Compliance Issues – Notice of Advance Compute (NAC) System

Given that the rules in question are already in force, **ITI would like to highlight issues our companies have encountered with compliance and persistent problems with the Notice of Advance Compute (NAC) system.** It is our understanding that the NAC system did not come online until Friday, December 1 – two weeks *after* the rules became effective. Once companies were able to use the NAC system, they noted requests for information that are not included in the rule text and to which certain companies are not privy. This is most apparent in the case of original equipment manufacturers (OEMs), which are downstream users of advanced semiconductors and do not possess information proprietary to semiconductor companies.

ITI appreciates BIS's acknowledgment of this issue in its December 29 FAQs and clarifications regarding required information.

Even though BIS notes in the FAQs that it will respond within 25 days, uncertainty regarding whether a license will be required and **potential delay to the company's orders would cause reputational harm to affected U.S. and multinational companies, making them appear unreliable and adversely affecting their competitiveness. Therefore, ITI continues to recommend allowing companies to proceed with orders once they have submitted their notifications.** Additionally, a one-time Commodity Classification Automated Tracking System (CCATS) review could be employed to determine if future notifications are required or, alternatively, if an annual reporting process is sufficient. This will enable companies to plan appropriately and not disrupt commitments to supply chain partners, infrastructure investment, etc.

Regarding *NAC Notification Requirement 740.8 (a)(2)* ITI requests that BIS provide clarification on the definition of "multiple exports" in the context of NAC. It is unclear if "multiple exports" refers

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to multiple exports to *the same party* or *the same product*. It is also unclear if the exports must all be associated with a single purchase order. Additionally, we request clarification on whether a notification for a parent company applies to all subsidiaries. We would also appreciate clarification regarding what constitutes "the same product" and whether this includes other (or future) generations of the product.

It is unclear whether the NAC notification requirement applies to exports where the Country Group D:5/Macau Entity is a party to the transaction but not the ultimate destination. Further clarification would be appreciated regarding whether the requirement for a license applies when advanced computing items pass through a Chinese company but are destined for a non-Country Group D:5 end user.

ITI recommends that BIS eliminate the requirement for inclusion of a purchase order in the NAC filing, as an export license does not mandate a purchase order. This requirement appears inconsistent with the use of the NAC function as a license exception.

Finally, ITI recommends that BIS create sub-categories to differentiate items that are NAC-eligible from items that require an export license (i.e., items incorporating 3A090.b ICs versus items incorporating 3A090.a ICs). As the rule is currently written, there is no differentiation for products that are eligible for NAC versus products that need an export license.

Applicability of Deemed Exports and Deemed Reexports

ITI appreciates that deemed exports were exempted from the updated rules, which will enable the U.S. to continue to attract and retain the best AI and data center scientists and engineers. Requiring a license for each of these employees would have drastically deterred talent and decreased innovation, while imposing a new licensing requirement would significantly disrupt ongoing activity in the United States.

Today, U.S. companies can develop advanced semiconductor technology, in part, because of significant recruiting efforts to attract the world's top talent—both U.S. and non-U.S.—within particular technological disciplines. Top U.S. scientists and engineers want to collaborate with the best scientists and engineers from around the world, regardless of nationality or location. Placing restrictions on their ability to do so would discourage top U.S. talent from accepting positions in the United States or with U.S.-based companies, sending that talent offshore where these restrictions do not apply to foreign companies. A talent shortage for development of cutting-edge semiconductors already exists. Deemed export or deemed reexport restrictions would further exacerbate the issue, increase the cost of hiring talent, and delay projects that are already underway.

Companies' own security and intellectual property-focused protections would supplant or exceed any benefits that could be gained through deemed export and deemed reexport requirements. We encourage BIS to maintain the current carve out under 15 C.F.R. § 742.6(a)(6)(iv), as companies' own security and intellectual property-focused protections would likely exceed deemed export and deemed reexport requirements.

Definitional Issues & Requests for Clarification

Definition of "headquartered in"

BIS should narrowly define the term "headquartered in" in the EAR to target only entities wholly or majority-owned by a D:5 entity of concern. To facilitate compliance with restrictions, BIS should also provide and continually update a list of entities that meet these criteria.

We understand the U.S. Government's interest in preventing diversion of advanced AI chips. However, **the term "headquartered in" is overly broad and could include organizations in which D:5 entities have only a minority ownership interest, no control over the day-to-day operations of the entity, and do not present national security concerns.** Applying controls so broadly risks casting U.S. companies as unreliable suppliers and driving customers to foreign suppliers, many of which are Chinese.

Chips Designed or Marketed for Data Centers

ITI strongly supports BIS's exclusion for chips not "designed or marketed for use in datacenters" (*Note 2 to 3A090*). **However, for companies reselling other companies' chips, it may not always be possible or practical to know the "design intent" of the chip, beyond how companies market the chips.** Accordingly, while manufacturers can assess whether their chips are "designed or marketed for use in datacenters" resellers may only be able to confirm whether the manufacturers *market* the chips for data center applications.

BIS may consider a definition that directly links the 3A090 integrated circuit for determining "use in data centers." Based on our members' assessment of the rules, high-performance GPUs used in home gaming systems currently do not require NAC or an export license; however, GPUs that support cloud gaming or virtual desktops are currently captured by 3A090.b and require NAC and/or a license. Thus, we request that BIS provide additional guidance regarding the term "data center" within the context of this AI rule. BIS should clarify what specific types of data centers may be implicated and whether there are specific criteria for such data centers. **ITI also requests that BIS provide confirmation that edge computing is not considered as "data centers," and that there is a clear carve-out for chips that are not capable of large-scale AI training.**

ITI recommends that BIS consider a license exception for exports of 3A090, 4A090, or .z products to countries in Country Group D:1 or D:2 but not in D:5 if the export is for use in an IaaS provider's datacenter under the operational control of a company headquartered in a D:1 or D:2 country group. Datacenters are highly secure facilities, and companies that maintain these datacenters have strong controls – and incentives – to ensure that hardware is not removed from the premises or diverted for uses other than in providing IaaS services. Thus, exports to datacenters in these countries do not present the same risks of diversion to D:5 countries or Macau.

BIS should issue an exception for servicing of consumer products, such as video game consoles, which contain components meeting the 3A090.a or 3A090.b performance parameters that were sold prior to November 17, 2023. Otherwise, U.S. manufacturers may face a competitive disadvantage and significant legal exposure under China's consumer protection laws, which mandate the provision of replacement parts for up to two years following sale of a consumer product. BIS could consider a corresponding requirement that the consumer must return the defective part or product for destruction by the manufacturer, such that the manufacturer can verify that it is making a one-for-one replacement of defective products and not making any additional exports.

Temporary General License (TGL)

The term "ultimate end use" in the TGL requires clarification, especially regarding whether it includes software and technology. It is currently unclear what constitutes knowledge of "ultimate end use" and what is expected from exporters who cannot ascertain that use. For example, an exporter that ships to an original design manufacturer (ODM) may be aware that the ODM will

build and sell servers, but the exporter may not know to whom distributors will ultimately sell the product.

ITI also requests clarification regarding **whether the 2023 TGL supersedes the expiration of the 2022 TGL**, specifically whether companies can use the new TGL to continue or resume activities meeting the TGL product and end use scope.

ITI requests confirmation that recipients can be located in D1 and D4 countries. As written, shipments are limited to exports, reexports, and transfers to D1, D4, and D5 (minus A5, A6) when the recipient is located, but not headquartered, in Macau or a D5 country. However, the intent seems to be to permit exports, reexports, and transfers to D1, D4, and D5 countries. Please clarify.

Restricted Support (RS) Definition

ITI suggests that the Restricted Support (RS) definition explicitly mention that companies headquartered in D1, D4, and D5 countries are to be restricted, aligning with the preamble's intent.

Questions Regarding Infrastructure-as-a-Service (IaaS)

ITI appreciates that BIS is carefully considering approaches to expanding AI-related export controls to Infrastructure-as-a-Service (IaaS) and soliciting industry input prior to developing proposed rules. This is a complex issue, and we welcome the opportunity to comment.

Although the United States is currently a global leader in IaaS, other countries are advancing in the industry, particularly China, which has the largest IaaS providers outside of the United States. Many European and Middle Eastern countries are also seeking to build their own IaaS champions. Governments and competitor companies are citing concerns about extraterritorial U.S. regulations and continuity of service issues to advance their own competitiveness and justify exclusion of U.S. companies and technology from their markets and supply chains. Overly broad and discretionary export controls would reinforce fears about dependence on U.S. technology companies and put U.S. IaaS providers at a competitive disadvantage.

Broad, unilateral controls restricting U.S. IaaS providers from full participation in global markets would undermine U.S. technological leadership. This would allow foreign IaaS providers to expand adoption of their products and services and lead development of industry standards, while U.S. IaaS providers would lose their ability to influence these standards, as well as access to a crucial global customer base. To ensure export controls do not block U.S. economic growth and technological leadership, BIS should impose only narrowly tailored controls to address essential and clearly defined U.S. national security interests. Further, BIS should prioritize multilateral engagement and agreement with allies before taking any unilateral action.

Addressing access to "development" at an IaaS provider by customers developing large dual-use AI foundation models with potential capabilities of concern

ITI recognizes BIS's interest in preventing diversion of advanced chips that could be used to harm U.S. national security; however, access to compute capacity via IaaS is not comparable to access to and diversion of physical chips. It is important to understand that training large dual-use AI foundation models currently requires thousands of chips connected with highly-performant networking and supported by other specialized infrastructure, like cooling. If an individual gains physical possession of a controlled chip, they can physically connect that chip with others to create a cluster for use in training a dual-use AI foundation model. However, an IaaS customer would not

have that capability, as they are only accessing compute capacity and not obtaining the chips themselves. Moreover, a foreign IaaS customer using a large cluster will already be subject to reporting via the mechanisms established in Section 4.2(c) of EO 14110. **ITI recommends that those mechanisms be developed, and their efficacy assessed, before any further regulatory action is undertaken.**

Should BIS choose to pursue IaaS-related controls, those controls should be narrowly tailored to apply based on access to compute capacity, using advanced AI chips subject to the ECCN 3A090 controls, that is necessary to develop a dual-use AI foundation model, which is compute capacity of greater than 10^26 FLOPS. ITI notes that measures of compute capacity used to describe dual-use foundation models may change, and the U.S. government should maintain consistency across various regulatory efforts as the technology and metrics develop[1]. Tying controls directly to 3A090 chips will support BIS's objective of ensuring that IaaS solutions do not undermine the effectiveness of existing controls and ensure IaaS providers are not disadvantaged compared to exporters of physical chips.

Concerns with Monitoring IaaS Customers

In response to BIS's questions regarding the feasibility of monitoring customers' use of compute capacity via IaaS, this would present numerous challenges. Executive Order 14110's definition of "dual-use foundation model" includes criteria that the AI model exhibit high levels of performance at tasks that "pose a serious risk to security, national economic security, national public health, or safety." **IaaS providers generally lack sufficient information about and access to a customer's AI model to determine whether it exhibits such characteristics.** IaaS providers do not have visibility into the models that customers are developing on their infrastructure, as the IaaS provider cannot access customer workloads, and customer content is encrypted to comply with security and data privacy requirements. Further, IaaS customers typically consider information about training data and methods of training AI models to be sensitive, proprietary information, and they have a strong commercial interest in safeguarding this information by limiting IaaS providers' access to it. While IaaS providers are aware of the identity of the customers, providers do not have visibility into their customers' activities or into the details of the model itself, including how it is trained, what its capabilities are, or how the customer intends to use it, which will be critical for BIS's ability to determine whether the model presents a threat. ***Only the customer*** **has and can submit this information to BIS. Accordingly, BIS should continue to follow its established – and effective - framework and place any notification or licensing requirement on the customer in any new IaaS-related controls.**

Considerations for Any Potential Export Controls related to IaaS access to Advanced Compute Capacity

Should BIS consider drafting IaaS-related controls, ITI recommends that BIS provide a specific list of entities that would be subject to such controls. This approach would provide the with flexibility to impose restrictions on any entity globally it identifies as presenting a national security concern, without undermining U.S. IaaS providers in the global market. A list could be based on existing lists, such as the Military End User List or the Treasury Department's Chinese Military Industrial Complex

[1] Compute capacity is currently the best available measure for any IaaS-related controls because model capabilities scale in relation to the amount of compute (and data) used for training.

List, or a new list of entities that pose AI-specific national security concerns. This is a similar proposal to the list that BIS created in connection with military-end user restrictions.[2]

If IaaS-related controls apply to a similarly broad set of countries and entities as the October 17 controls, the global chilling effect on using U.S. IaaS providers will be extensive, driving away customers due to concerns that their access to U.S. IaaS providers will be restricted and accelerating other countries' industrial policies to build their own IaaS champions. Even the perception that access may be restricted will result in customers moving away from U.S. IaaS providers, rather than take the risk that they will lose access to critical IaaS technologies.

Application of Export Notifications/Requirements to IaaS Customers (not Service Providers)

Should BIS contemplate any export licensing or notification requirements, the customer – and not the IaaS provider - should be responsible for notifying/obtaining a license from BIS prior to accessing restricted computational capacity. **This position is consistent with the Export Administration Regulations (EAR) and BIS's Cloud Advisory Opinions, which establish that provision of computational capacity is not an export and an IaaS provider is not the exporter when providing computational capacity[3].** And, the mere ability to use or access the service does not constitute a "release"—a term which only applies to technology and source code by the EAR definition.[4]

Although the IaaS provider is not the exporter, BIS could issue guidance as a best practice to IaaS providers to confirm that its customers have complied with any export authorization requirement, prior to accessing the restricted computational capacity defined by BIS.

Should BIS consider imposing any controls on IaaS providers, ITI recommends those controls apply equally to U.S. and foreign providers. As explained above, the IaaS provider is not the exporter, and therefore any export restriction should apply to the customer of the IaaS provider. However, to the extent that BIS applies any restrictions on IaaS providers, they should apply equally to U.S.-based or non-U.S. based IaaS providers. If export controls apply only to U.S. IaaS providers, it will put U.S. industry at a critical disadvantage versus foreign IaaS providers, many of which are Chinese. This will undermine both U.S. industry and the U.S. Government's national security goals, as customers will simply move to Chinese and foreign IaaS providers in order to develop models without any constraints.

Redundant ECCNs and Changing Compliance Requirements

While BIS has focused on developing new export controls, ITI respectfully suggests that efforts should also be dedicated to re-evaluating existing controls to ensure they are consistent, clear, and up to date. For example, the new ECCN 3A991.p added in 2022 is effectively a "catch-all" ECCN for all integrated circuits that could perform computation. With this addition, 3A991.a is no longer needed, as 3A991.a is a subset of 3A991.p (i.e., all CPUs meet the performance threshold of both 3A991.a and 3A991.p). Evaluation of existing controls would help avoid confusion caused by the presence of multiple ECCNs with different licensing requirements.

Relatedly, determining compliance with incremental license requirements is a complex process with numerous implications across the business, including future planning and supply chains**. A lack**

[2] 15 C.F.R. §§ 744.21(a)(1)-(2) (limiting application of Burmese, Cambodian, Chinese and Venezuelan military end-user restrictions outside the respective countries to entities listed in separate supplement and Russian entities designated with footnote 3 in supplement no. 4 to part 744).

[3] Application of EAR to Grid and Cloud Computing Services at 2-3 (Jan. 13, 2009); *see* 15 C.F.R. § 734.13.

[4] 15 C.F.R. § 734.15(a)-(b)

of clarity and statements from U.S. government officials that licensing requirements could change at any given moment adds unnecessary confusion and instability to the business environment. That uncertainty and lack of clarity affects business continuity, timeliness of shipments, geographic expansion plans, and conclusion of contracts – all of which may undermine the competitiveness of U.S. companies and broader U.S. economic and national security. ITI respectfully requests that the Department of Commerce and the U.S. government treat these potential impacts seriously and endeavor to consult with industry well in advance of the release of new or revised rules.

ITI would be pleased to provide additional information or answer any questions regarding our comments above.