I am Carl Schonander, Senior Director for International Public Policy for the Software & Information Industry Association (SIIA). Thank you for the opportunity to share our views on the modernization of the North American Free Trade Agreement (NAFTA).

The Software & Information Industry Association (SIIA) is the principal trade association for the software and digital information industries. The more than 800 software companies, data and analytics firms, information service companies, and digital publishers that make up our membership serve nearly every segment of society including business, education, government, healthcare, and consumers. As leaders in the global market for software and information products and services, they are drivers of innovation and economic strength – software alone contributes $425 billion to the U.S. economy, directly employs 2.5 million workers, and supports millions of other jobs. For more information, please visit the SIIA Policy Home Page. I would like to for the purposes of today’s hearing also request that our June 12, 2017 letter to Ambassador Lighthizer, as well as this testimony, be part of the record.

Our strongest recommendation is that USTR concentrate on negotiating a binding commitment for the parties to permit cross-border data flow, with only very narrow exceptions. Incorporating such a provision in a modernized NAFTA will create a
template for us and for other countries seeking to establish 21st Century trade relationships.

In my testimony today, I would explain this recommendation by making the following three points.

First, cross-border data flows are exceptionally important for all sectors, not just to the technology industry, and therefore to the NAFTA and global economy as a whole. The global economy is relevant because a modernized NAFTA will ideally serve as a template for other trade agreements.

Second, developments in new business-to-business and business-to-consumer digitally-deliverable products and services such as the Internet of Things present a rich emerging environment with tremendous opportunity for jobs and growth in, for example, the energy, manufacturing, agricultural, and healthcare sectors, as well as the technology and information sectors. Not only are these new and emerging technologies full of possibility, but the trade of existing digital goods and services continues to grow. I will provide information on these developments from a global perspective, which will hopefully inform your negotiations with Canada and Mexico.

Third, as USTR has reported, the United States had a $7.6 billion services surplus with Mexico in 2016 with intellectual property protected exports of computer software and industrial processes accounting for a significant share of this surplus. USTR reported that in 2016, the United States had a services trade surplus with Canada of $24.6 billion with intellectual property protected exports of software and audio-visual products accounting for a significant share of that surplus.

These three factors explain why SIIA considers horizontal commitments for cross-border data flow in the NAFTA to be indispensable.

**The Value of Cross-Border Data Flows**

It is methodologically challenging to put an economic value on data flows which did not exist a quarter of a century ago. In 2016, the McKinsey Institute, providing a transparent methodology, estimated the value of global data flows in 2014. It calculated that in 2014, cross-border data flows “may have raised global GDP by roughly $2.8 trillion.” Even if McKinsey is somewhat off, this number is indicative of the tremendous contribution cross-border data flows make to all economies, certainly the advanced economies of NAFTA. In 2014, the United
States, Canada, and Mexico accounted for 26.5% of global GDP. So, using the McKinsey estimate, cross-border data flows increased the three countries’ GDP by $741 billion. Again, this is a very rough estimate. But given that the United States is at the forefront of the Internet economy, the estimate for the United States is probably conservative, which underscores the United States’ profound interest in digital trade rules appropriate for its current and future economy.

Emergence of the Internet of Things (IoT) Relating to B2B Technologies

Today, recent digital developments in the Internet of Things (IoT) present profound opportunities for economic growth. SIIA defines the IoT as ubiquitous connectivity where people do not just interact with devices, but devices also interact directly with each other. In early 2016, SIIA released a white paper on the IoT where we go into this in more detail. It is important to note that IoT technology is estimated to have an economic benefit of $4 to $11 trillion by the year 2025.¹

This benefit spreads across a breadth of sectors with its largest impact on the industrial and manufacturing sectors where business-to-business applications will account for a majority of this value. In the energy sector, estimated economic gains range from $22 billion in 2020 to $14.2 trillion in 2030.² In the manufacturing sector, the estimated gains range from $900 billion and $2.3 trillion by the year 2025.³ In the agricultural sector, the benefit is estimated to be approximately $100 billion by the year 2025.⁴ Finally, in the healthcare sector, the benefit is estimated to be between roughly $1.1 trillion to $2.5 trillion by the year 2025.⁵

Sensors allow for predictive maintenance, energy management, platform security, logistics, compliance and risk management, and analytics. Such analytics allow for the optimization of conditions to reduce waste and cut costs. They can decrease equipment wear and tear and increase worker safety. IoT technologies can help determine when the best time to harvest crop would be. It can help

² Accenture. “Winning with the Industrial Internet of Things.”
manage smart grids for renewable energy sources. Wearables can detect serious illnesses and monitor the medical needs of elderly persons who live alone. Autonomous cars can increase driver safety and decrease the frequency and severity of accidents.

In order to realize IOT’s full benefits, data has to flow. As a practical matter, this means that interoperability mechanisms for personal information data flows are needed because it is often challenging to distinguish between personal and non-personal data. As one interviewee told the Swedish Board of Trade, “… privacy always gets into the process somewhere.” 6 This why a positive data flow obligation is so important to SIIA and its member companies.

SIIA hosted an event in Washington, D.C. with the Congressional High Tech Caucus and the Congressional Internet of Things Caucus to discuss the influence of IoT technologies on the future of the global economy. This event featured industry leaders in the IoT space as well as policy experts who discussed the following recommendations given the fact that IoT is an emerging technology and is still fairly new. These recommendations can also be found in SIIA’s white paper:7

- Do not seek an overarching IoT Policy Framework; existing laws have functioned effectively and provide substantial consumer protection.
- Privacy rights for the IoT should be based on risk and societal benefits, such as public health, national security, economic growth, and the environment.
- Encourage best practices for privacy and cybersecurity; industry best practices and self-regulatory codes of conduct provide more flexibility to evolve and adapt over time.
- Promote technology neutrality and avoid technology mandates, which are especially important given IoT’s complex ecosystem.
- Standards should be open and industry-led so that they can combine a wide range of data sets across myriad analytics environments and applications.
- Policies for embedded software should allow manufacturers to provide by contract for product integrity to ensure that the product functions as intended, which is often critically important for consumer safety.

Developments in the Provision of B2C Digital Products and Services

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Business-to-Consumer digital products amount to a significant portion of digital commerce. Social Media usage continues to be high. On-Demand Audio and Video streaming services are also growing. According to a study by the Pew Research Center, Facebook continues to be the most popular social media platform among users. Roughly 79% of all adult internet users use Facebook. 68% of all adult internet users in the United States use Facebook. These numbers are trending upward.

If we take a further look, not just to number of accounts, but to the frequency of consumption, this number is also high. 76% of Facebook users use the site daily. The next frequently consumed platforms are Instagram at 51% and Twitter at 42%. However, to get a broader scope at the frequency of usage, it’s important to note that 56% of online adults use more than one platform.

There are similar numbers in Canada according to this eMarketer estimate. Facebook is even more dominant in Mexico according to the Interactive Advertising Bureau de Mexico. Ninety-seven percent of social media consumers use Facebook.

**Recommendations for NAFTA**

Given the global developments described above, SIIA considers that digital trade should be a focus for the NAFTA negotiators. The level of ambition should be high even when there is no specific market access barrier because the goal should be to arrive at an agreement that could serve as a model for other accords. The 2015 Trade Promotion Authority (TPA) remains the guide for what to seek to accomplish.

**Digital Trade Rules within NAFTA**

Ideally, a modernized NAFTA agreement would improve upon what was achieved in the Trans-Pacific Partnership (TPP) with respect to digital trade rules in a renegotiated NAFTA. The positive core achievements - a binding data flow obligation, while respecting sometimes distinct national approaches to privacy; a prohibition against data localization, with narrow exceptions language that does

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not carve out financial services; the protection for source code; and the non-discriminatory treatment of digital products - should be the minimum goals for the renegotiated NAFTA. Commitments should not be undermined through inadequate or non-existent definitions. For example, in the TPP the commitment not to reveal source code did not apply to “critical infrastructure.” However, critical infrastructure was not defined so as to render the commitment’s usefulness questionable.

**Intellectual Property within NAFTA**

As we said in our written testimony, the digital sector relies on Intellectual Property Rights and there is a need to update the NAFTA’s IPR chapter. Moreover, many of our members are disturbed by the implementation of the education exception to copyright in Canada, which does not provide fair compensation to educational publishers. The USTR raised concerns about it in their recent Special 301 report. We recommend that you engage with your Canadian partners on the Intellectual Property Rights Chapter during the NAFTA modernization negotiations. The goal should be to persuade them to resolve this issue in a way that provides fair compensation for educational publishers, including those based in the US, enabling them to produce high quality digital and print material for Canadian schools and universities.

**Conclusion**

Thank you, Commissioners, for this opportunity to testify. I look forward to your questions.