Autonomous Vehicles and Export Controls

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In spring 2016, Transport Canada and the United States Department of Transportation announced a number of initiatives to collaborate on Vehicle-to-Vehicle and Vehicle to Infrastructure technology to support “seamless cross-border vehicle operations”. Despite cross-border regulatory initiatives like this, the underlying technology in these vehicles is heavily regulated by Canadian and U.S. export controls that restrict the cross-border flow of autonomous vehicle technology outside the U.S. and Canada.

What are export controls?

Export controls regulate the flow of goods across borders and establish permitting systems to track certain goods with the aim of preserving Canadian and international security.

Canadian export control legislation

Canada’s domestic export control legislation implements its international commitments made under the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, the Treaty on the Non-Proliferation of Nuclear Weapons, the Missile Technology Control Regime, and the Australia Group controls on chemical weapons.

The Export and Import Permits Act implements Canada’s international export control obligations for dual-use goods (i.e., military/security and civil applications) and other goods under the above noted instruments. The Act aims to ensure that exports are aligned with Canada’s foreign policy and other strategic interests. Goods subject to export controls are listed in the Export Control List (ECL), which is enforced by the Trade & Export Controls Division of Global Affairs Canada. The Act prohibits exports of controlled goods without a permit from the Minister of Foreign Affairs.

Canadian export control and autonomous vehicles

Many of the components of autonomous vehicles and their related hardware, software and technology are controlled pursuant to the dual-use provisions in Group 1 of the ECL.

In particular, the cryptography used in operating autonomous vehicles is a controlled dual-use product under Canadian export legislation and as a result, export permits are required to export those components, the technology required to make them and vehicles containing those components (subject to certain narrow exceptions).

Goods containing cryptography may be exported under the authority of individual export permits identifying specific consignees, or multi-destination export permits, which allow for exports to multiple destinations without specifying consignees. Applicants must satisfy various conditions to obtain a multi-destination permit including implementation of an export control compliance plan. In addition, two general export permits (GEP) are available for exporters to use without an application in specified circumstances: (1) GEP 45 – Cryptography for the Development or Production of a Product; (2) GEP 46 – Cryptography for Use by Certain Consignees. In both instances, conditions and restrictions apply in relation to the countries of destination and the nationality and ultimate control of the consignees.

U.S. export control law

Recent policy developments in the United States may make it more difficult to export autonomous vehicle technology from the U.S. and Canada. The U.S. Export Administration Regulations (EAR) regulate exports of U.S.-origin dual-use goods, software and technology, including re-exports from Canada and other countries, as well as re-exports of goods containing U.S.-origin inputs or technology. More recently, the U.S. enacted the Export Control Reform Act of 2018 (ECRA) which allows the Department of Commerce to establish controls on export, re-export or transfer (in country) of “emerging and foundational technologies” (ECRA, section 1758).

On November 19, 2018, the Bureau of Industry and Security (BIS), which controls the export of dual-use items under the EAR, announced a notice of proposed rulemaking, seeking public comment on “criteria for identifying emerging technologies that are essential to U.S. national security”. This process will likely result in proposed rules for new Export Control Classification Numbers for the Commerce Control List.

It is likely that the BIS’ findings on “emerging and foundational technologies” will include technology like the artificial intelligence behind computer vision, an important component of autonomous technology. Any tightening of U.S. export controls will directly affect Canadian exports since U.S. export authorization will be required to export products incorporating such components or technology from Canada over and above any applicable Canadian export permits.

Conclusion

Autonomous vehicles raise the prospect of broad economic and social impacts in personal and commercial transportation, public infrastructure and municipal planning, supply chain management, related trades and professions, and many other fields. At the same time, the security risks inherent in autonomous vehicles and their control systems

are potentially acute. Governments can be expected to play a role in the implementation and dissemination of autonomous vehicle technology, including export controls related encryption and AI technology. In light of the close integration of Canadian and U.S. supply chains as well as shared strategic and defence interests, there is a high likelihood that Canada will follow suit with parallel restrictions on exports of “emerging and foundational technologies”. Businesses involved in the development and manufacturing of autonomous vehicles and related technology and inputs would be well advised to review and upgrade their security and compliance policies, including those relating to export controls.

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