

# U.S. imposes strict export controls on certain artificial intelligence software for automating the analysis of geospatial imagery

29 January 2020

The U.S. Department of Commerce's Bureau of Industry and Security (BIS) published an [interim final rule](#) on 6 January 2020 imposing licensing requirements on certain artificial intelligence software specially designed to automate the analysis of geospatial imagery. Effective immediately, licenses are required for exports and re-exports of such software to all countries, except Canada. The deadline for submitting comments to BIS regarding the rule is **6 March 2020**.

While this rule does not appear to be tied directly to BIS efforts to impose controls on certain "emerging technologies," we note that artificial intelligence was identified by BIS as a category of "emerging technology" that BIS was considering for additional controls, and therefore BIS may impose controls on additional types of artificial intelligence software of technology in the future.

## Background

On 6 January 2020 BIS published an interim final rule amending the Export Administration Regulations (EAR), which classified certain geospatial imagery software under the Export Control Classification Number (ECCN) OY521 series. As a result, there is now a license requirement for the export and re-export of these items to all destinations, except Canada. This applies immediately.

The ECCN OY521 series, which was created in 2012, provides BIS with a means to quickly control items when BIS determines, with the concurrence of the U.S. departments of Defense and State, that foreign policy reasons justify a high level of control while BIS considers more permanent controls. These departments also determined that the software could provide the United States with a significant military or intelligence advantage. This software will only remain classified under ECCN OY521 for one year, unless the classification is extended, provided that the U.S. government submits a proposal to obtain multilateral controls over the software. If the U.S. government does not do so, and does not move the item to a permanent ECCN, the software will be designated as EAR99 and therefore subject to the lowest level of control under the EAR.

Based on the rule's technical requirements, only the following software is controlled:

"Geospatial imagery software specially designed for training a Deep Convolutional Neural Network to automate the analysis of geospatial imagery and point clouds, and having **all** of the following:

- Provides a graphical user interface that enables the user to identify objects (e.g., vehicles, houses, etc.) from within geospatial imagery and point clouds in order to extract positive and negative samples of an object of interest;
- Reduces pixel variation by performing scale, color, and rotational normalization on the positive samples;
- Trains a Deep Convolutional Neural Network to detect the object of interest from the positive and negative samples; and
- Identifies objects in geospatial imagery using the trained Deep Convolutional Neural Network by matching the rotational pattern from the positive samples with the rotational pattern of objects in the geospatial imagery.

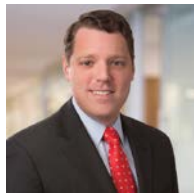
Technical Note: A point cloud is a collection of data points defined by a given coordinate system. A point cloud is also known as a digital surface model."

While the scope of this ECCN is highly circumscribed, these controls could potentially apply to companies engaged in the analysis of satellite or other aerial imagery, including automated image processing, classification, or analysis, such as the automated identification of specified types of objects in such imagery. Given the strict controls in place on OD521 software, companies engaged in activities in this space should carefully assess whether this ECCN potentially applies to their software.

### Implications for stakeholders

- **Immediate effect**: The interim rule was effective on 6 January 2020. Significant penalties can be imposed if controlled products are exported without the proper license. For this reason, companies should determine whether their products are potentially classified under this ECCN before continuing to export software.
- **Licensing**: The OD521 software is subject to a licensing requirement for export, re-export, or transfer to all destinations other than Canada. The only available license exception is paragraph (b)(2)(ii) of License Exception GOV (15 Code of Federal Regulations § 740.11), authorizing certain exports, re-exports, and transfers made by or consigned to a U.S. government department or agency. Applications for export licenses are subject to a case-by-case license review policy.
- **Opportunity for comment**: Stakeholders and companies who have concerns or seek clarifications regarding the rule may submit comments to BIS by 6 March 2020.

### Contacts



**Anthony V. Capobianco**  
Partner, Washington, D.C.  
T +1 202 637 2568  
[anthony.capobianco@hoganlovells.com](mailto:anthony.capobianco@hoganlovells.com)



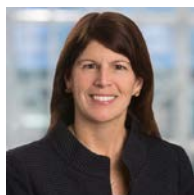
**Brian P. Curran**  
Partner, Washington, D.C.  
T +1 202 637 4886  
[brian.curran@hoganlovells.com](mailto:brian.curran@hoganlovells.com)



**Aleksandar Dukic**  
Partner, Washington, D.C.  
T +1 202 637 5466  
[aleksandar.dukic@hoganlovells.com](mailto:aleksandar.dukic@hoganlovells.com)



**Ajay Kuntamukkala**  
Partner, Washington, D.C.  
T +1 202 637 5552  
[ajay.kuntamukkala@hoganlovells.com](mailto:ajay.kuntamukkala@hoganlovells.com)



**Beth Peters**  
Partner, Washington, D.C.  
T +1 202 637 5837  
[beth.peters@hoganlovells.com](mailto:beth.peters@hoganlovells.com)



**Stephen F. Propst**  
Partner, Washington, D.C.  
T +1 202 637 5894  
[stephen.propst@hoganlovells.com](mailto:stephen.propst@hoganlovells.com)



**Anne W. Fisher**  
Counsel, Washington, D.C.  
T +1 202 637 6569  
[anne.fisher@hoganlovells.com](mailto:anne.fisher@hoganlovells.com)



**Adam J. Berry**  
Senior Associate, Washington, D.C.  
T +1 202 637 2871  
[adam.berry@hoganlovells.com](mailto:adam.berry@hoganlovells.com)

**Molly Newell**  
Associate, Washington, D.C.  
T +1 202 804 7790  
[molly.newell@hoganlovells.com](mailto:molly.newell@hoganlovells.com)

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