

Study on the efficient export control for the Intangible Transfer of Technology

Sung-ho Yoon, Sun-do Choi, Chansuh Lee, Jong-sook Kim*

Korea Institute of Nuclear Nonproliferation and Control, Yusungdae-ro 1534, Yusung-gu, Daejeon, Korea, 305-348

*Corresponding author: jongsookkim@kinac.re.kr

1. Introduction

The Nuclear Suppliers Group (NSG) is a group of nuclear supplier countries that seek to contribute to the non-proliferation of nuclear weapons through the implementation of the NSG Guidelines. Nuclear items that may contribute to develop weapons of mass destruction (WMD) are allowed to be exported only if it is granted from the government. Not only listed items, but also technology related to the items needs to obtain a license for transfer.

Related Technology means specific information required for the development, production or use of any listed items in NSG guideline. It may take the forms of technical data or assistance. Technical Data may take forms such as document, drawing, description, report, manual and instruction. And, it can be written or recorded on storage medium such as disk, tape and read-only memories. Technical assistance may take forms such as instruction, skill, training, working knowledge and consulting services.

Technical data or assistance can be transferred by intangible manners such as an electronic means (e.g. email, internet, telephone or fax) and through the oral (e.g. seminar, meeting or workshop) [1].

Currently, ROK's export control regulation is not classified between the transfer of listed items (or general technology) and intangible transfer of technology (ITT). It may make a loop hole or cause inefficient implementation of export control. The purpose of this study is to suggest the efficient control method for ITT independent from item control method.

2. Addition of export control subject

Though item trade has occupied most of the global trade, the export of technology has been increasing rapidly from years ago. Consequently, export control of technology related to the listed items becomes very important issue. And, NSG member states emphasize the importance of ITT control and develop the measures for the ITT control.

ROK has revised the Foreign Trade Act and the Enforcement Decree of Foreign Trade Act to control the ITT in 2014. According to the amended Enforcement Decree of Foreign Trade Act, exporters need an export license for transferring of technology to foreign nation as follows [2];

Even though Korea has initiated a legal basis for ITT and for nuclear export control, she is yet to set up an implementation system. It will make difficult to control ITT under the current domestic legislation. For example, there are some problems as follows request of government assurance for insubstantial technology, re-

transfer control, unspecified importers or emergency transfer in some cases.

Information and communication networks	<ul style="list-style-type: none"> • Telephone • Fax • Email
Oral or actions	<ul style="list-style-type: none"> • Instruction, training • Demonstration • Meeting, seminar, workshop
Recording media or data processing unit	<ul style="list-style-type: none"> • Film • Magnetic or optical disc • Semiconductor memories • Computer

3. Technology control in developed countries

3.1. The United States

In the United States, export means an actual shipment of items out of the United States, or release of technology (or software) to a foreign national in the United States. The regulations for ITT control do not exist separately, because the United States does not distinguish between tangible form and intangible form.

The obligation to get a license before releasing controlled technology to a foreign person is informally referred to the "deemed export" rule. Releases of controlled technology to foreign nationals in the US are "deemed" to be an export to the foreign national's country or countries of nationality [3].

The subject of technology control in the US is included all of the electronic transfer (internet, e-mail, fax, etc.) or direct transfer (consulting, telephone, lectures, field trips, etc.) regardless of the transfer method.

It is also controlled in the US that "release" of technology or software. Technology or software is "released" for export through:

- 1) Visual inspection by foreign nationals of US-origin equipment and facilities
- 2) Oral exchanges of information in the United States or abroad
- 3) The application to situations abroad of personal knowledge or technical experience acquired in the United States.

3.2. The United Kingdom

The export control regulations of the United Kingdom consists of the Export Control Act (2002) and the Export of Goods, Transfer of Technology and Provisions of Technical Assistance Order (2008). In this Order, technology is defined as specific information for the development, production or use of nuclear items.

Technical Assistance means any technical support related to repair, development, manufacture, testing, use, maintenance or any other technical service [4].

The U.K. divides transfer by an electronic means and transfer by any non-electronic means. The former means a transmission of software or technology by telephone or other electronic media, while the latter means a disclosure of software or technology by any means (or combination of means). Even if the technical assistance was specified in the list it is only to be controlled when it is used for WMD.

3.3. Germany

The definition of “technical assistance” comprises not only any technical service such as repair, maintenance and development, but also transfer of practical skills and knowledge such as consultation and training. Technical assistance can also be granted in oral or electronic form by telephone or fax (foreign Trade and Payments Ordinance, AWV) [5].

Germany separates the intangible technology such as a technical assistance and the general technology such as a technical document. According to export control regulations in Germany, technical support in Germany by a resident shall be subject to a license if the resident has been informed by the Federal Office of Economics and Export Control (BAFA) that the technical support is destined for use in relation to the development, manufacture, handling, operation, maintenance, storage, detection, identification or spread of nuclear weapons or other nuclear explosive devices. And technical support by a German or a resident shall be subject to a license if the German or the resident has been informed by the BAFA that the technical support is related to the construction or operation of facilities for nuclear purposes within the meaning of Category 0 of Annex I of Regulation (EC) No. 428/2009 in the countries cited in Section 9 (Algeria, Iran, Iraq, Israel, Jordan, Libya, the Democratic People’s Republic of Korea (DPRK), Pakistan or Syria) [6].

In other words, that means technical support for the construction or operation of nuclear facilities shall not be subject to a license when recipient is not listed countries.

3.4. Japan

The Japanese export control system is comprehensively managed by the Ministry of Economy, Trade and Industry (METI) mainly through the Foreign Exchange and Foreign Trade Act.

According to the Article 25 in Foreign Exchange and Foreign Trade Act, 1) resident needs to obtain export license when he provide specific kinds of technology to non-resident in the specific region, 2) anyone needs to obtain export license when he bring out specific kinds of technology over Japan border to the specific region. The transfer of technology or software by intangible

means like an oral and email is also the subject to the control [7].

Japan distinguishes between resident and non-resident as follows;

Resident	<ul style="list-style-type: none"> • Japanese national • Foreign national who has been staying in Japan for more than six months • Foreign national who is working for a Japanese or foreign company in Japan
Non-resident	<ul style="list-style-type: none"> • Foreign national • Japanese national who is working for a Japanese company in a foreign country • Japanese national who is leaves for a foreign country intending to reside there for more than two years

4. Suggestions for the ITT control of the ROK

From the technology transfer export control regulations of each countries, several recommendable suggestions for the ROK’s control regulation are drawn.

First, export licensing for the nuclear item and technology should be conducted country-specifically. These days the ROK becomes the major nuclear power plant exporter of the world. It occurs a lot of export licensing applications which are burden to regulatory bodies. By applying regional export control, regulatory body can concentrate on counties of concern efficiently.

Second, specialized regulation for the ITT is needed. There are lots of unclear sentences to regulate both item and technology. To strictly control ITT, defining subjects, activities, procedures etc. is necessary.

Third, compliance program in export control system is needed. Unlike typical item based export, ITT occurs very often. Controlling all of cases by regulatory is hardly feasible. By utilizing post reporting system of companies, universities, and research institutes, regulatory can manage entire technology transfer.

5. Conclusion

From the result of this study, several main feathers in regulations of developed countries are drawn.

First, they define that technical assistance (or support) is the object of permission. And, they have a clear distinction between resident and non-resident.

Second, The UK and Germany do not control the technical assistance related to construction and operation of nuclear facilities for peaceful use, as long as technology does not transfer to recipient that has a nuclear proliferation concerns such as the DPRK, Iran or Pakistan.

Finally, ROK companies, including universities and research institutes, mostly transfer a form of technical assistance for nuclear facilities to the UAE, Jordan or NSG member states for peaceful use. Therefore, it is helpful to categorize countries by analyzing nuclear proliferation concerns to reduce administrative burden and encourage nuclear industry.

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