

How to Efficiently Manage Movable Properties under the New Collateral Regime in Korea

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I. Introduction

A new collateral law, jointly formulated by the Judiciary and the Ministry of Justice and realized as the “Act on Security Interests in Movable Properties, Receivables, etc.”(hereinafter the “Act”), will come into force in June 2012 in Korea. During the past few years, the Ministry of Court Administration¹⁾ and the Ministry of Justice were respectively working out their own draft bills that would allow small-and-medium sized enterprises (SMEs) or venture businesses to use movable properties, account receivables and intellectual property rights (IPRs) as collateral to raise funds. The two draft bills were combined in 2009 and resulted in a single bill to secure movable properties, receivables, etc. as collateral.²⁾ The combined bill was submitted to, and deliberated by, the National Assembly, and finally promulgated by the President on June 10, 2010.

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1) The Judiciary Task Force on Specific Registry, *Legislative Guide for the Introduction of Assignment Registration of Movable Properties and Receivables*, Ministry of Court Administration, November 2007.

2) See the Hearing Proceedings for the proposed Act on July 17, 2009; Kim Jae-Hyung, “Proposed Legislation Regarding Security in Movable Property, Receivables, etc.”, Monthly *Beop Jo*, Korean Lawyers Association, November 2009, pp.5-51.

After a two-year preparation period necessary to establish nationwide electronic registration systems, the Act will become effective on June 11, 2012. After that, the range of assets that can be used as collateral will be broadened to include factory machinery, inventories, account receivables, IPRs and even farm animals.³⁾

Under the existing collateral regime, movable properties could be used as collateral on a limited basis. In principle, hand-over of the goods for pledge to a certain creditor is possible, and fiduciary transfer of title, or *yangdo-dambo*, is conventionally used for the purpose of security. For a creditor, the latter approach is vulnerable to double assignment or acquisition by *bono fide* purchaser due to insufficient perfection and ineffective publicity of ownership. In addition, IPRs have been granted as collateral only in the form of pledge.⁴⁾ Accordingly, there is a demand for a new collateral regime, which allows movable properties, receivables and IPRs to be used as collateral, to help small and self-employed businesses⁵⁾ borrow from financial institutions.

However, this new collateral regime will be effective only when the creditors regard it as convenient and secure. The new Act might be useless if creditors regard it as inconvenient or unreliable to create security interests.⁶⁾ What is necessary to narrow the gap between the necessity and actual practices⁷⁾ is the adoption of state-of-the-art

3) Small businesses and venture enterprises with little real estate were in great need of this kind of Act, which is regarded as an exemplary bill to support the livelihoods of common people.

4) See the Purports of Legislation from the Official Gazette of June 10, 2010.

5) The new Act authorizes only such legal entities as listed in the registries of corporation and/or company name owing to a technical reason.

6) Creditors will surely avoid such assets which comprise so many items to be identified and controled because they cause inconvenience and expenses in creating, surveying and enforcing security interests therein.

7) This kind of gap was previously raised by the author in "Proposed Legislation on the Secured Transactions in Reliance on the Corporate Movables and Account Receivables", *Comparative Private Law* Vol.14 No.2, Korea Association of Comparative Private Law, June 2007, pp. 235-241.

information technology (IT).⁸⁾

The primary purpose of this paper is to explain the contents of the Act (II. 1), and to identify the problems associated with the existing movable property collateral (II. 2). Then a possible solution that could satisfy collateral grantors and secured creditors at the same time will be explored (III). Finally this paper will discuss expected merits and advantages of the new methodology suggested by the author (IV).

II. The Gist of the New Act and the Existing Collateral Regime

1. The Substance of the New Act

The major content of the Act is as follows:⁹⁾

a. Security interests in movable properties and receivables (Articles 3 and 34)

Movable properties, including a number of movables or those to be acquired in the future, or receivables with designated creditors who are entitled to claim cash or its equivalents, including a number of receivables or those to be acquired in the future, may be provided as collateral, subject to appropriate security registration.

b. Eligibility for security interest providers (Articles 3, 4, 34 and 37)

Only a corporate body or person, who has registered his/her company name under the Commercial Registration Act, may create security

8) Of course, state-of-the-art technology may not always prove productive and develop unforeseen collateral consequences. For example, mobile phones have dramatically changed business life, but they are also used for innovative criminal schemes.

9) See the Official Gazette at *supra* Note 4).

interests in movable properties or receivables. When the company name registration is deleted, the already created security interest shall be kept intact.

c. *Keun* (continuing) security interests (Articles 5 and 37)

In case the maximum amount of secured credit is set and the confirmation of the actual amount of credit used is reserved to the future. Security interests in movable properties or receivables may be created. In this case, any discharge or transfer of such secured credit prior to the confirmation thereof shall not affect the already created security interests.

d. Security interest provider's duty of declaration of any encumbrance on movable properties or receivables (Articles 6 and 37)

In order to protect secured creditors who have difficulty in finding any encumbrance on the collateral, a person who intends to create security interests in movable properties or receivables is required to declare in the security agreement the ownership thereof or any encumbrance on the collateral.

e. Effects of security registry (Articles 7 and 35)

1) Security interests in movable properties shall be effective subject to the registration in the Security Registry. The priority of competing security interests in the same movable properties shall depend on the order of registration. In case the registration in the Security Registry and delivery of the same movable properties take place on multiple occasions, the priority of competing rights thereof shall depend on the order of the registration and delivery thereof unless otherwise provided by law.

2) When security interests in receivables are registered with the Security Registry, they may be set up against third parties except the

obligor of the receivables which were provided as collateral. In case the registration with the Security Registry, and the notice or consent in accordance with Articles 349 or 450(2) of the Civil Act take place for the same receivables, the priority among them shall be asserted against third parties except a third obligor by the order of registration, arrival of notice or consent thereof.

f. Effects of security interests (Articles 8 through 11, 13, 14, 17, 19, 20 and 37)

1) A secured creditor is entitled to be satisfied by the collateral preferably against other creditors, and may exercise the security interests in the whole collateral until when the whole secured credit has been satisfied. A secured creditor may exercise security interests in the goods adhered to, and accessory of, the collateral, and the fruits of the collateral which such secured creditor has acquired or may acquire upon attachment against, or demand of delivery of such collateral. And the security interests may be transferred together with the secured claims.

2) A secured creditor may exercise the right to surrogate the proceeds in cases of not only destruction, damage or expropriation but also sale or lease of collateral. When the value of such collateral decreases remarkably owing to reasons imputable to the security interest creator, the secured creditor may demand the restitution or provision of equivalent collateral from such security interest creator. In case of infringement upon the collateral by a third party, the secured creditor may demand return of the lost collateral, removal or prevention of such infringement.

g. Enforcement of security interests (Articles 21, 23, 27 and 29)

1) In case of movable property security interests, a secured creditor is entitled to enforce such security interests by auction or liquidation through acquisition or disposal. In case of liquidation by means of

acquisition or disposal, such secured creditor shall enforce security interests one month after the notification of how to enforce such security interests to the interested parties including the obligor subsequent to the due date so as to protect such interested parties. Then such secured creditor shall pay excessive proceeds to the obligor. If the proceeds of such collateral are attached or provisionally attached, or a third party asserts rights against the proceeds, the secured creditor may discharge obligations by depositing such proceeds with the court-designated depositary.

2) When the proceeds of joint collateral are distributed at the same time, the proceeds shall be allotted to the creditors in proportion to the proceeds of each collateral. In case a part of the proceeds of joint collateral is distributed earlier than schedule, junior secured creditor shall surrogate the right of senior secured creditor against other collateral so as to protect the junior secured creditors of each collateral.

h. Right to apply for security registration and acceptance
thereof (Articles 38, 41 and 45)

Security registration shall be carried out to create, transfer, modify, delete or extend the security interests in movable properties or receivables jointly by security holder and security grantor. The application for the change of security holder name may be conducted solely by the security holder. Such application shall be regarded as effectively accepted when the application data is recorded electronically by the electronic registration systems. Upon the registration by the Registrar, such registration shall be effective as from the time of acceptance.

i. Term of existence of the security registration and extension registration (Articles 49)

In view of the fact that the most of secured claims are of commercial nature, and that security interests extinguish along with such secured claims, the term of existence of the security registration subject to this Act shall not exceed five year, the same as the extinctive prescription period of commercial claims, but the period of the security registration may be extended.

j. Registration of IPR security interests and effects thereof (Articles 58 and 59)

If an IPR holder provides more than two IPRs to ensure the payment of the same claims, the security interests subject to this Act may be registered with the Official Registry of IPRs. When such security interests in IPRs are registered, the effect of such registration shall amount to the pledge of such IPRs.

2. Problems with the Existing Movable Property Collateral

Currently creditor banks have difficulty extending loans for a factory before completion. The only practical way to secure their interest is to acquire a conventional security interest called “*yangdo-dambo*” i.e., a fiduciary transfer of title of collateral, of machinery, equipment and/or inventories until the completion of the factory. Upon the completion of the factory, such machinery and equipment may be provided to creditors as joint mortgage on condition that they are listed in the mortgage registry of the factory site or building.¹⁰⁾

Possessory security interest like pledge prevents security interest

10) See Article 6(1) of the Factory and Mining Foundation Mortgage Act.

providers from using and profiting from such collateral. Inventories and receivables may be converted into negotiable instruments such as warehouse warrants or promissory notes. In case of pigs or fish in a farm, collective *yangdo-dambo* is usually created by specifying the collateral and differentiating from other goods of such security interest provider, for instance “the whole pigs in a certain hog farm”.¹¹⁾ In this regard, the Act on Asset-Backed Securitization (hereinafter the “ABS Act”) has enabled corporate originators to raise funds by making a pool of inventories and receivables and convey the specified assets to a special purpose vehicle which is to issue asset-backed securities.

But the administration of such collateral in reality is quite different from theory. The following three examples illustrate the difficulties.

<Case #1> Factory Machinery

After the term of lease for the use of factory machine expired, a bank extended a loan to a factory owner and acquired the mortgage by listing such machine in the existing factory mortgage registry. In the meantime, while using said machine, the factory owner transferred the title of the machine together with other machines to a third party by means of *yangdo-dambo*. In such a scenario, is it possible for the creditor bank to enforce its own factory mortgage over a factory building and machinery at once? What if a person makes objections asserting the ownership of the machine?

Other examples: a creditor bank was granted *yangdo-dambo* over high-priced numerical control milling machine by a company, which was constructing a factory building. Before the completion of the factory building, the numerical control part of said milling machine was lost. Or, a factory owner raised funds by means of asset-based loan (ABL) secured

11) Supreme Court Decisions of 85 Nu 941 on October 25, 1988; 87 Nu 1043 on December 27, 1988; 88 DaKa 20224 on December 26, 1990.

by a pool of factory machinery and inventories. In such cases, the creditor bank could have little knowledge of the double assignment of collateral.¹²⁾

Then, with respect to the collateral in question, how can the creditor bank assert its own right or priority of ownership against another owner or the special purpose vehicle (SPV) for ABL? Was there any publicity tag showing the title or ownership of the collateral?

<Case #2> Solar Houses or Collective Collateral at a Hog Farm

Encouraged by the Korean government's "Build Green Home" project, a number of banks are expected to begin financing the building or renovation of houses with solar energy equipment. Creditor banks will be granted collateral over the solar equipment including solar panels, inverters, batteries, etc. Faced with how to administer those geographically scattered solar houses, surely a very difficult job, creditor banks will have to choose one option on a cost-benefit analysis whether they entrust security service companies to administer the collateral, or give up such collateral administration.

Another example may be found at a hog farm. A farmer borrowed money and granted floating collective *yangdo-dambo*¹³⁾ over the all 3,000

12) The fixed date of *yangdo-dambo* agreement or ABL agreement certainly determines the priority. However, without an effective sign or tag showing the ownership, collateral holder's assertion could be denied by others.

13) Originally when a security holder has obtained the possession of collective goods existing at the time of a *yangdo-dambo* security agreement by means of "sale and lease-back" of floating collective goods, the *yangdo-dambo* security interest shall affect the current collective goods maintaining the same collectivity as a whole even though a separate *yangdo-dambo* security agreement is not executed for the individual in-coming goods. This principle applies to collective goods such as fish in a fish farm or inventories in a warehouse. Since a floating collective *yangdo-dambo* security agreement expects inflow and outflow of individual goods comprising the whole collective goods, it is for the convenience of the transactions that the legal effect of *yangdo-dambo* security interest presumes to affect the individual goods brought in or taken out by the security interest provider. Supreme Court decision 88 DaKa 20224 on December 26, 1990. If, however, the number of goods brought in by the security interest provider increases and finally exceed remarkably the original number of goods

hogs in his possession at the farm to the lender, who has required the farmer to maintain 3,000 hogs as a whole in a security agreement. Afterwards, the farmer leased the hog farm and sold all 3,000 hogs to a third party, without the lender's consent. The third party/lessee/buyer then sold 2,000 hogs and bought 2,000 other hogs at his expense. Not knowing these circumstances, the lender demanded the delivery of the 3,000 hogs at the hog farm by asserting the security interest of *yangdo-dambo* in the hogs. In the actual case, the current possessor denied the lender's demand on the grounds that he is an innocent purchaser.

<Case #3> Security Problem of a Closed Factory

When a factory owner went insolvent and defaults on a loan secured by factory machinery, the creditor bank, after locking the factory gate, dispatched a guard hired to prevent employees from taking the machinery out of the factory. In the meantime, the term of lease for the use of the factory expired, while the creditor bank managed to sell the machinery to recover part of its claims. The lessor of the factory building demanded that the creditor bank pay the unpaid rent or unjust enrichment amount which exceeded the proceeds from the sale of machinery, because the creditor had effectively occupied the factory after the expiration of the lease agreement with the factory owner.

Faced with the risk of paying a considerable amount of rent to the lessor of a factory, a creditor bank would not likely dispatch a guard. Instead, it is inevitable that the creditor bank will rush the disposal of the machinery in question regardless of any possibility of restructuring, or mergers and acquisitions of the problem factory. Alternatively, the creditor may establish a policy not to obtain the security interest in machinery

in a specified place, the scope of *yangdo-dambo* security interest will be limited to an appropriate extent by interpreting the intent of the parties concerned. Tahk, Kyung-Kook, "The Effect of a floating collective *yangdo-dambo* security agreement", *Law Journal* (No.3333), January 24, 2005.

from a debtor who leased a factory without additional collateral, or rent equivalents, from the debtor. Considering that most small businesses used to lease factories in the industrial districts, financial institutions are unlikely to extend loans and to obtain security interests in factory machinery.

The same applies to a factory where a creditor bank needs to dispatch a guard for the protection of properties, because a creditor in possession owes a legal obligation to third parties and is responsible for any wrongful acts like corruption of soil of the factory.¹⁴⁾ How can a creditor overcome such a situation with no presence of a guard on the site?

3. A New Solution

Employing an electronic registration system seems to be a global trend when establishing a movable property collateral regime. There is no exception in view of the number and variety of goods of high mobility not only in civil law countries based on a one-good-one-right principle but also other jurisdictions with non-possessory security interests. For example, the Atlantic provinces of Canada¹⁵⁾ and the United States, which have long acknowledged personal property as security, are operating filing offices with computerized personal property.

There are several examples of an electronic registration system. Japan, which ushered in movable property collateral ahead of Korea, has already implemented the electronic registration system.¹⁶⁾ Mexico legislated

14) Article 758 of the Civil Act.

15) Atlantic provinces of Canada except Quebec have been operating the Personal Property Registry via Atlantic Canada On Line <<http://www.acol.ca>> under the Personal Property Security Act since 1974. Whon-Il Park, "A Paradigm Shift in a Modern Law on Secured Transactions", *Journal of International Legal Affairs* No.7, Graduate School of International Legal Affairs, February 2003, p.80.

16) In Japan, the initial registration of assignment of account receivables was carried out only by the Registrar of Civil Affairs Bureau, Ministry of Justice, Tokyo. Later, for the convenience of fund raising by small businesses and the security of receivables

secured transactions law reforms in 2000 and amended the federal Commercial Code that provides for the establishment of a Unified Registry of Movable Property Collateral (Registro nico de Garantias Mobiliarias or RUG).¹⁷⁾

There are also examples of multinational efforts for the electronic registration of movable collateral. The International Institute for the Unification of Private Law (Unidroit) initiated the Cape Town Convention on International Interests in Mobile Equipment of December 2001, which provides for mobile equipment such as aircraft and railway rolling stock as collateral. Aircraft and aircraft engines, railway rolling stock and satellites are to be registered in the electronic registry.¹⁸⁾ The United Nations Commission on International Trade Law (UNCITRAL) Legislative Guide on Secured Transactions of 2008 also provides for the publicity requirement to show the encumbrances on the movable properties,¹⁹⁾ and puts a model registry regulation into consideration for implementation.

In particular, Korea's movable property registry will be conducted electronically, taking advantage of computer and communications

assignment transactions, the electronic filing and on-line application systems in line with the "e-Japan" strategy were adopted. When the amendment to the existing "Act Concerning the Exceptional Cases of the Civil Law for the Perfection of Assignment of Receivables" in order to add movable properties to the object came into force in October 2005, the electronic registration system has been implemented across Japan.

- 17) The new Article 32 bis of the federal Commercial Code provides for the RUG to be a centralized registry for all types of security interests granted in favor of any creditor that carries out commercial activities in movable property. The RUG will be a section of the PRC under the supervision of the Ministry of Economy (Secretaria de Economia), in which all filings are to be carried out electronically, through the RUG website <<http://www.rug.gob.mx>>. John E. Rogers, "Mexico's Unified Secured Transactions Registry Offers New Opportunities for Secured Lending," Strasburger & Price, LLP, February 14, 2011.
- 18) As for the railway rolling stock, the Protocol to the Cape Town Convention on International Interests in Mobile Equipment on Matters Specific to Railway Rolling Stock was established, and Unidroit Secretariat conducted the information session in February 2011 for potential bidders to become the Registrar of the International Rail Registry.
- 19) Suk Kwang-Hyun, *Study of UNCITRAL Legislative Guide on Secured Transactions*, Ministry of Justice, April 2010; UNCITRAL Legislative Guide on Secured Transactions, GA Res. 63/121, UN GAOR, 63rd Sess., 17 December 2008.

technologies with necessary functions of high-speed bulk processing and access to broadband Internet. Such registry can identify and specify an individual good as collateral. It can help users to confirm the identity or similarity, specify the goods, and check information regarding encumbrances for the goods.²⁰⁾

The new Act premises that the Security Registry of movable properties and account receivables shall be conducted electronically (Article 7). Specifically, the following provision of the Act should be noted for the purpose of this paper.²¹⁾

Article 17 (Inspection of Status Quo Collateral and Supplement of Collateral)

(1) The security interest provider shall not, without any justifiable reason, deny the request of the secured creditor to inspect the status quo collateral. In this case, necessary measures including posting electronically identifiable tags, etc. may be taken for the inspection of status quo collateral subject to the agreement between both parties.

Thanks to this proviso in Paragraph 1 Article 17 of the Act, which was inserted during the course of the National Assembly deliberation, the security administrative issues, discussed in Cases 1 through 3, can be easily resolved.²²⁾

20) The ABS Act requires that the conveyance and specification of underlying assets subject to a certain ABS program shall be filed with the Financial Supervisory Commission in such a manner as CD ROMs or other similar electronic means (Paragraph 3 Article 6 of ABS Act). Such data are directly disclosed at the website of the DART (Data Analysis, Retrieval and Transfer) system of the Financial Supervisory Service <<http://dart.fss.or.kr>>.

21) *MOJ Guide of the New Act* explains briefly as follows: "As there is no restriction on the method of survey, a secured creditor may conduct survey of the status quo collateral by itself, entrust collateral administration to a specialized company, or demand the periodic report of the status quo collateral from the security interest provider. However, if there is a justifiable reason, such as where the survey of the status quo collateral costs too much to the security interest provider or causes excessive hindrance to the business of the security interest provider, such demand may be rejected." *MOJ Guide to the Act on Security Interest in Movable Properties, Account Receivables, etc.*, December 12, 2011, p. 63.

Here, the “electronically identifiable tag”²³⁾ means RFID (radio frequency identification) or AIDC (automatic identification and data capture) tag.²⁴⁾ RFID-related technology is the kingpin of ubiquitous sensor networks, and is advancing with fewer technological and financial problems.²⁵⁾

<Figure> How AIDC Tags Work for Corporate Information System



Source: <<http://www.edipax.com>>

- 22) From the stand point of bank employees, there are several options from *keun* mortgage, *yangdo-dambo*, lease, sale with retention of title, ABS among others. They are fearful of such situation as collateral is stolen or lost, factory employees are trying to take valuable movables out for compensation on the brink of insolvency.
- 23) For the purpose of technological neutrality, the Act is stipulated by a general term. At present, the electronically identifiable tags include plain bar code, two-dimension bar code or QR, OMR, OCR, MICR, magnetic strip, RFID, IC card, biometrics and so forth. It also covers other break-through technologies to be introduced in the future.
- 24) Typical AIDC means not only RFID, QR (quick response) at present, but is intended to be a catch-all term to cover technological advancement in the future. RFID, in some cases active RFID, is usually applied to high priced movable properties. If budget matters, QR will do such functions as expected to some extent.
- 25) Main concerns regarding RFID are general functions, durability, connectivity with other systems, availability of frequency band, among others. When it comes to businesses, such further questions should be promptly answered as the occurrence of system errors when connected with other entities, governance of control, standardization of data format and operations, distribution of expenses, security systems to prevent unauthorized access to, forgery and alteration, duplication or removal of RFID. See *supra* Note 7), p. 235.

The current state of AIDC technology enables an electronic tag posted on, or embedded in, the object, to identify and record related information like specifications, status of use and location into it, thereby to make data records about the object. When being adopted for collateral administration, such AIDC tags allow a secured creditor to check any loss, damage, decrease of value of collateral, assess the expected price of the property for sale or auction, and take other necessary measures.

III. How to Efficiently Manage Movable Properties under the New Act

1. Security Agreement regarding Movable Property Collateral

As discussed in <Case #1> and <Case #2> above, secured creditors have been unaware of any discrepancies, damage to value or commingling, and may discover that this has occurred until it is too late, resulting in confusion of collateral. Indeed, the more easily *yangdo-dambo* is created in Korea, the more uncertain and unsecured the enforcement of other security interest will be.²⁶⁾ Thus, the proviso in Paragraph 1 Article 17 of the Act advances the goal of increased certainty for the creditors, as they can request that the security interest provider from time to time

26) Even though a factory machine listed in the factory mortgage registry is the object of factory mortgage, such mortgage in the machine, which is owned not by the security interest provider but by a third party, cannot affect the machine. Likewise, if the property listed in the registry has been granted as *yangdo-dambo* to a third party, then it belongs to the *yangdo-dambo* holder. rather than the mortgage holder. So the factory mortgage cannot affect such property. Supreme Court Decision 2003 Da 29036 delivered on September 26, 2003. If a third party has obtained the ownership of a factory machine as *yangdo-dambo* prior to the factory keun mortgage registration conducted by a creditor, the *yangdo-dambo* holder in the capacity of its owner prevails over the mortgage holder. The factory keun mortgage in the mortgage registry shall not affect its ownership. Busan District Court Decision 2007 KaHap 24414 delivered on October 9, 2008.

survey the status quo collateral lest the collateral should be lost or damaged.

Why, then, does the Act leaves the posting or imbedding electronically identifiable tags subject to the mutual agreement between the secured creditor and the security interest provider?²⁷⁾ Since the cost to equip movable collateral with AIDC tags is considerable, it follows that doing so should remain optional rather than mandatory for the parties to determine whether to do so, as well as its details, e.g., the kinds and specifications of AIDC devices, allotment of expenses, operation and suspension of AIDC functions, maintenance period of such devices, cooperative duties of concerned party, and so on.

Therefore, a would-be secured creditor is required to take the following factors into consideration:

- a. Is it necessary for a secured creditor to survey the status quo collateral in possession of a debtor?
- b. Is there any problem to make an agreement to survey collateral with the security interest provider?
- c. Is the specific AIDC tag sufficiently reliable?
- d. Does it cost too much to the security interest provider?
- e. Is there any cost-effective alternatives?
- f. Does it affect business of the debtor?
- g. Would it be much better for a secured creditor to create value-added information by means of AIDC tags?

If the answer is negative to questions c, d and f, the security interest provider may say no to the proposed agreement to survey collateral. If the security interest provider is not in a position to survey collateral

27) There were some arguments while drafting the provisions of the Act. The majority of the MOJ Drafting Committee members supported contract-based autonomy. However, the legal provisions were believed to make it possible that such issues as standardization, prevention of overlapping investments, legal stability and promotion of IT industries could be settled by the national agenda and the public policy.

while using the properties, it may postpone the survey but cannot deny it to the end. When the security interest provider has already used RFID tags for the purpose of asset and facility management, it has only to add security-related data to the tags at the request of the creditor bank.

2. Pre-Conditions to Movable Property Collateral Management Utilizing RFID Technology

How, then, can the placement of AIDC or RFID devices based upon an agreement between the parties be implemented?

In <Case #1>, the factory machine,²⁸⁾ equipped with RFID tags on each separable part, can be checked and maintained via the status quo collateral survey.²⁹⁾ Even though factory employees moved and painted machinery anew, RFID tags could identify the exact machine. Likewise, RFID-embedded pivotal parts of the machine would be detected at the factory gate. Any possible damage to, or modification of, RFID tags deemed to be the damage to the security, which results in the event of default.

In <Case #2>, a creditor bank can hardly manage the innumerable collateralized equipment of thousands of solar houses in terms of labor, expenses and time. In a hog farm, the situation gets worse. Only the RFID tag in each pig's ear or neck³⁰⁾ could enable the creditor as well as

28) The Act shall not be applied to the factory machines listed in the Factory Mortgage Registry (Article 3(3) i). If a factory owner prefers such advantages as the catch-up effect, joint collateral and lump-sum auction of the factory mortgage, he will take the choice to register its machine in the Factory Mortgage Registry.

29) It should be more convenient and secure than ever before for creditor bank officers in charge of collateral administration. They can reconcile the original entries of the registry with the actual collateral lists reported from the locations of collateral from time to time. They need not visit the site of collateral to find out any loss or damage of collateral. The current state of information technology has realized remote monitoring of the objects and relieved bank officers from the concern of devaluation of collateral owing to mismanagement.

30) It is technically possible to put RFID tags in livestock, including pigs and eels. In

the owner to trace and control the pig's movement or other change of status. The facts behind <Case #2> are taken from an actual and highly complex case adjudicated by the Supreme Court in 2004. The appellate court ruled that the pigs, which were assigned by the initial security interest provider, then re-assigned to the second assignee, should belong to the final assignee or *yangdo-dambo* holder, even though the number of pigs fluctuated. But the appellate court decision, which was in line with the conventional practices was reversed by the Supreme Court. The Supreme Court said that *yangdo-dambo* affected only the pigs in the farm, which were initially assigned to the defendant, as well as the new pigs which were bred and raised, bought or exchanged with the proceeds generated from hog-farming, in the course of ordinary farm operation. Thus, the other pigs which were brought in with funds of a different source are out of the scope of *yangdo-dambo*.³¹⁾

As a consequence, even a secured creditor cannot assert its security interest against a third party, who has not acknowledged any encumbrance on the property but brought in new movable goods at his/her expenses, rather than the *yangdo-dambo* provider or the assignee in case of few changes in appearance of the floating collective collateral.³²⁾ Therefore, any creditor could be unsecured without such

Korea, owners of pet animals are requested to put RFID tags in their neck by law. However, the cost is another problem to be solved by the financial assistance of the government, SME Association and creditor banks.

31) Supreme Court Decision 2004 Da 22858 delivered on November 12, 2004.

32) In case that a third party has brought in new movable goods to apparently collective properties at his expenses for unknown reasons, movable goods under the possession of a *yangdo-dambo* provider and other movable goods under the ownership of a third party co-exist at the same place. It could not be construed that collective properties exist at the disposal of a *yangdo-dambo* holder as a whole. Why does the *yangdo-dambo* interest affect the present collective goods in such place as designated by the *yangdo-dambo* agreement? It's because both parties agreed as such. Therefore, a third party and individual goods brought in thereby beyond the scope of *yangdo-dambo* agreement shall not be affected by such agreement. Truly, this conforms to the basic concept of deference to private ownership. Kyung-Kook Tak, "The Effect of the Floating Collective *Yando-dambo* Agreement", *Law Journal* (No.3333), January 24, 2005.

publicity tool as a RFID tag showing its security interest on the collective collateral.³³⁾ Likewise, the assignee who has brought in new movable goods at his expenses will have difficulty proving the new movable goods brought in at his own expense are separated from other properties without such tools.

In <Case #3>, unmanned surveillance of a factory can be realized by means of RFID technologies employed by a creditor bank, which posts a number of RFID tags for surveillance in and out of the factory and effectuates substantial dominance. When an unauthorized person breaks into the factory to take out valuable goods, the creditor bank can deter such burglary by detecting the incident and dispatching security guards.

Even though the above cases illustrate the necessity of AIDC devices applicable to collateral administration, whether the parties enter into an agreement to employ such devices is an altogether separate issue, involving a number of issues, such as the technological reliability, economic feasibility and legal stability with respect to AIDC devices.³⁴⁾

First, the technological reliability of RFID devices for the purpose of collateral administration needs be confirmed as an RFID system³⁵⁾ is operated in a contactless manner. If an RFID tag does not work or makes errors in recognizing data, such malfunctions would be detrimental because it deals with valuable properties. In fact, a wireless highway toll

33) RFID technology seems to be appropriate to collateral administration of frozen or bred fisheries products. Dae Chung, et al., *Study on How to Promote Maritime Financing*, Ministry of Land, Transport and Maritime Affairs and Korea Institute of Marine Science and Technology Promotion, December 31, 2010, pp. 69-71.

34) Foreign legislation need not be considered because no foreign country has adopted RFID technologies in the collateral administration. RFID is brand new AIDC technologies emerging during the last few years. Professor Lynn LoPucki of UCLA Law School told the author that it costs so much that the federal and state government of the United States cannot afford to employ RFID technologies at more than five thousand filing offices across the nation.

35) RFID systems for the individual movable goods comprise terminals within the band of 500Mhz, 900Mhz and 2.45Ghz, readers, tags, printers, etc. along with the collateral administration and operations. When using QR or two-dimension bar code, an AIDC system is comprised of terminals, readers and printers.

payment (Hi-Pass) devices employing RFID systems often cause issues at express highways toll gates. However, since the Public Procurement Service has applied RFID systems in managing properties of the state and local governments for a couple of years,³⁶⁾ the systems have been stabilized to a satisfactory level. Because they operate in a static condition, the results seemed to be successful.

Second, the cost involved for the use of RFID devices and the survey of the status quo collateral should be within the scope tolerable by the parties, or the expected benefit should be much bigger than the cost. At present, a considerable number of big corporations and logistics enterprises are using RFID systems. The increased demand should lead to lower costs.

Also, the benefits of RFID-based collateral administration can outweigh the costs, especially if the benefits are realized to their full potentials. Collateral databases collected and maintained via RFID devices may be transferred to the electronic registry in accordance with the Act, and will be used to identify and detect double registered goods in advance. Whether a certain collateral is located in or out of the site is automatically checked. Furthermore mobile readers can detect any loss of a certain good or part of machinery, and instantaneously report to the site's service center. An active RFID tag may update its location information while being moved to different places.

In addition, the current status and traceable history of the collateral could be reported periodically and accumulated into databases. At the request of a creditor, such databases can generate reports to show the scoring from ten [excellent] to zero [useless] or A [excellent] to D [no rating]

36) The Public Procurement Service has employed RFID systems for the efficient management of government-owned goods since 2009. In 2010, government offices have established all-out electronic systems based upon RFID for the real-time management from procurement to maintenance and disposal of individual goods. Hankyung Newspaper, "Government-held Goods to be Managed with RFID from 2010", December 4, 2009.

based upon the current status and traceable history of the collateral, which could be helpful to assess the proposed auction price of such collateral on the occasion of the enforcement of security interests. Such database-stored information may be classified and combined to create necessary value-added data for use at the on-line/off-line marketplaces of second-hand machinery and inventories. These value-added information could certainly facilitate the disposition, sale or exchange of movable collateral goods.³⁷⁾

Third, RFID-based collateral administration and the assertion of security interests should not be an obstacle to the existing legal regime. In 2008 during the course of drafting the Act, the majority of civil law scholars argued against and opposed the adoption of RFID devices on the ground that the new technology-based provision could shake the conventional theory and case law, in particular, with respect to innocent acquisition.³⁸⁾ Take an example where a person purchased a machine taken out of a factory not knowing that the machine had been stolen and embedded with invisible RFID tags with records of ownership. The Korean courts have long acknowledged the innocent acquisition on condition that the purchaser actually believes the seller is the owner of the movable property in outward appearance, and that such belief is without fault.³⁹⁾ In so far as the RFID tags show the genuine owner, however, the machine has some encumbrances which the would-be

37) In Korea, a patent “Business model conducting various value-added services based on the movable assets management system using Automatic Identification and Data Capture devices and its related operations” has been registered on the Register of the Korean Intellectual Property Office on March 9, 2011. Patent No. 10-1022762.

38) MOJ, Hearing Proceedings for the proposed Act on the Security in Movables, Receivables, etc., July 17, 2009.

39) The innocent acquisition of a movable property is provided for in Article 249 of the Korean Civil Act. The innocent acquirer satisfying the conditions stipulated in the Civil Act definitely obtains the right on the property, while the previous owner loses its right for good. Accordingly the innocent acquirer is not allowed to deny such legal effect and return the property to the previous owner. Supreme Court Decision 98 Da 6800 delivered on June 12, 1998.

innocent acquirer is required to prove his/her faultless acquisition.⁴⁰⁾ The innocent acquisition case law which has been conventionally observed must be twisted, they argued.⁴¹⁾

If and when the party relying on RFID systems bears the risk and such RFID tags are noticeably posted, there is a solution to overcome the innocent acquisition labyrinth that the genuine owner can be protected with an insurance policy like the title insurance on real estate in the United States.⁴²⁾ In circumstances where sophisticated IT products are widely used, businessmen or financial institutions dealing with movable properties are required to pay attention to the presence of AIDC devices in the valuable properties.

40) If a buyer bought composedly a machine at an open market on machinery in good faith not knowing the seller was not a genuine owner with no fault about such belief, he must be an innocent acquirer. A recent Supreme Court decision (2009 Da 93671 February 11, 2010) ruled that if the assignee bought it knowingly via a sale with retention of title and some installments remained, he is required to pay attention to and investigate the ownership of the machine as a merchant who deals with such kind of machinery. Accordingly he is deemed to be negligent in finding out the ownership to dispose of the machine as demanded in the course of business as for a buyer. Likewise, a buyer will be required to be cautious of the ownership or encumbrance of the machine which bears RFID tags in a noticeable manner, even though he is not equipped with a RFID reader. Then he shall be regarded as negligent in this matter.

41) The most important problems of electronically identifiable tags are the possibility of forgery, alteration, unauthorized modification, removal or malfunction of such tags, which result in infringement on the security interest and profit of the security holder, and legal entanglement. The debtor or a third party who caused such problems shall pay the damages owed to the security holder and be subject to penal punishment in accordance with Article 347-2 of the Criminal Act.

42) At the request of the author, Professor LoPucki of UCLA Law kindly commented as follows in 2007: "When some data recorded in RFID tags are transferred to the electronic registry intactly with convenience, the advantage and commercial benefit need to be much bigger than a mere 'inventory list'." He wondered if such merits as prevention of fraud and reduction of costs prevail over the possibility of forgery and alteration, or removal of RFID tags. However, creditor banks will be satisfied with the collateral administration and willing to extend more asset-backed loans, small businesses and venture enterprises are expected to borrow more money than ever. With secure countermeasures to forgery and alteration, or unauthorized removal of RFID tags, he thought the benefit could be much larger than the cost related with tags. *See supra* Note 7).

3. Movable Collateral Management Utilizing RFID Technology

In view of the above-mentioned issues, what should a creditor bank do once the Act is implemented? In accordance with Article 17(1) of the Act, a creditor bank may feel it necessary to enter into an agreement of collateral administration with AIDC devices prior to taking security interests in machinery, equipment and inventories. Here is a check list:

- a. Is the security interest provider equipped with an appropriate RFID system?
- b. Who will pay for the installation of necessary hardware and/or software regarding the RFID system?
- c. Does the security interest provider self-manage the RFID system, or outsource it to a third party?
- d. Is it necessary for a secured creditor to provide training courses to its staff members in charge of collateral assessment and administration?⁴³⁾
- e. Is it necessary to buy a RFID-related business model?⁴⁴⁾
- f. How will inputting data for registration into RFID tags be carried out?
- g. Is the creditor bank, security interest provider, and the Official Registrar connected with each other via the Internet?
- h. What are the emergency measures in case of cyberspace incidents?
- i. Is this on-line collateral administration related with another line of business, or hopeful of any kind of synergy effect?

43) For sustainable development of relationship banking, in-house or outside specialists for the assessment and evaluation of movable properties and factory machinery are in great need.

44) At present, RFID-based asset and facility management (A/FM) services are available in Korea. Furthermore, value-added services making use of RFID system-contained databases will be provided on demand as follows: maintenance, exchange, replacement, improvement of specific machinery and movable properties, search and deal-making of sellers and buyers, price negotiations, operation guarantee and other necessary consulting services.

Where the security interest provider has already adopted RFID systems, Items a through c will be put aside. Then, Items d and e, f through h shall be taken into consideration for a long-term and short-term strategies, respectively. The “profit taker should pay” principle applies, but, in some cases, the debtor/security interest provider is obliged to pay the expenses. The fact that adopting an RFID system is optional provides incentive for the debtor/security interest provider to adopt an RFID system, since it could increase long-term profits by obtaining more favorable lending terms. It would be no problem at all for big companies which have already operated RFID systems for asset management and logistics administration to pay for the expense, but the marginal enterprises like SMEs are increasingly in need of financial support from SME promotional programs.

Also a secured creditor may request the security interest provider to input the registry items regarding movable collateral under the Act⁴⁵⁾ into

45) Article 47(2) calls for the following items to be registered with the Movable Property Security Registry. A secured creditor may add some more items necessary for survey of the status quo collateral:

1. The name or company name of a security interest creator and the followings:
 - a. In case of a corporate body: Head office or main office and corporate registration number; or
 - b. In case of an individual who registered company name under Article 31 of the Commercial Registration Act: Name, address, resident registration number and business office;
2. The name and address of the obligor (In case of a corporate body: Name or company name, and head office or main office);
3. The name or company name of a secured creditor (In case of a corporate body: Name or company name, head office or main office and corporate registration number);
4. In case the security interest creator, obligor or secured creditor is a foreign corporate body: Local business office or liaison office. If there is no local business office nor liaison office, such things as stipulated by the Supreme Court Rule;
5. The reason of collateral registration and its date;
6. Specification necessary to identify the movable property or receivable, object of collateral registration as stipulated by the Supreme Court Rule;
7. The amount of secured credit or the maximum amount;

the RFID systems as well as the Movable Property Security Registry.⁴⁶⁾ For the purpose of survey of the status quo collateral, it is important to reconcile the content of the original registry and the status quo collateral, and to detect any discrepancies between the two databases via real time monitoring. The more the collateral databases accumulate value-added information, the more active the administration and arrangement for sale or exchange of collateral will be.

4. Case Study in Japan

In 2005, the Japanese government, i.e., the Ministry of Economy, Trade and Industry (METI), established an ABL⁴⁷⁾ Working Party composed of 18 members from financial institutions, businesses and academia. Government officials from the Ministry of Justice and the Financial Authority, and Chamber of Commerce and Industry participated in the ABL Working Party as observers. The Working Party had six meetings from September 2005 to March 2006.

Its result was compiled by Nomura Research Institute, assisted by Deikoku Data Bank, and published in ABL Working Party Report.⁴⁸⁾ The ABL Guideline was adopted by METI in March 2008.

8. Any agreement provided by the Provisos of Article 10 or Article 12;

9. The existence period of security interest;

10. The receipt number; and

11. The receipt date.

46) It is necessary for an electronically identifiable tag (regardless of RFID or a newly introduced AIDC device) to record, recognize or store the statutory registry items electronically. In other words, the data recorded in the tag should be easily transferred to the Official Registry, and vice versa. So long as the tag is not removed, destroyed or suspended, tag-attached property shall be identified, and any discrepancy between the Official Registry and the actual property shall be monitored and easily detected.

47) ABL means an asset-based loan secured not by collateral value but by stable cash flows. Whon-II Park, "The Innovative Structure and Legal Aspects of ABL", *Corporate Law in the Globalization Era* in Commemoration of Retirement of Prof. Ki-Soo Lee, Pakyoungsa, December 2010, p. 404.

48) This Report is available at <http://www.meti.go.jp/report/downloadfiles/g60704a01j.pdf>. Last visited October 31, 2011.

The ABL Working Party selected several model businesses of importance in terms of creativity and policy measures among the on-going ABL programs. Such model businesses showed the corporate needs and merits enjoyed by financial institutions, which were well publicized and examined from the practical point of view.

Among the model businesses, the “IT-based Inventory Management” type was a good example for the study of this article.⁴⁹⁾ In March 2006, Mizho Bank extended a loan to a rental company in Kyoto specialized in medical welfare equipment, and acquired security interests in all of the equipment in stock. Though lending took place only virtually (i.e., loan was not funded) because the company was in no need of money, IC tags⁵⁰⁾ were posted on all the equipment that was intended to serve as collateral.

As a consequence, Mizuho Bank had access to detailed, real time information on the inventory, and set a more precise credit limit. Mizho Bank was ready to check the public notification by IC tags. But it seemed to be necessary to prevent forgery and alteration of collateral data, to improve the social recognition and technological standards, and to upgrade the functions of IC tags, reader and writer so as to shorten the processing time.

The experiment revealed that the evaluation of collateral based upon the historic data recorded in the IC tags was difficult, and it was good for borrowers to increase self-governance, to establish an appropriate inventory management system, and to improve the relationship with the lender by means of interactive communications.

49) The ABL Working Party, *ABL Working Party Report*, Japan METI, March 2008, pp. 16-17.

50) In this Report, IC tags means RFID tags.

IV. Conclusion

When the new Act comes into force in June 2012, corporate movable assets, receivables and IPRs will be eligible for statutory collateral. It conforms to the global trend that collateral has been diversified from real estate only to the variety of movable properties, receivables, IPRs.⁵¹⁾ The new Act provides for security registries that will be established via Internet-based computer systems.⁵²⁾

Although the new collateral regime of Korea seems to be useful to borrowers, it should be secure and convenient from the standpoint of secured creditors. Effective enforcement of security interests is important as much as creation of security interests. In this regard, state-of-the-art technologies will be employed to narrow the gap between the policy of variety of collateral and the practice of convenient collateral administration. If sophisticated IT devices ensure the security and preservation of collateral, financial institutions are willing to extend loans on favorable terms to small businesses by taking movables and receivables as collateral.

This paper has suggested that RFID/USN technologies be used in the administration of movable properties. RFID systems are used to recognize the identity of machinery, equipment and inventories, to manage traceable history of collateral, and to control the operations and movement of

51) Since 2004, a number of countries including Denmark, France, Peru, Serbia, Ukraine and Vietnam have permitted general descriptions in loan agreements, allowing the use of all types of assets as collateral – present and future, tangible and intangible. “Getting Credit”, *Doing Business 2008 – Comparing Regulation in 178 Economies*, World Bank & IFC, 2008, p. 32.

52) The Act provides that computer and communications system will process movable collateral registration and receivables collateral registration, and the application for registration and its receipt shall be conducted by electronic means. Articles 2 viii, 40, 42, 45 and 47 of the Act.

collateral on an integrated basis, while USN (ubiquitous sensor network) technologies are useful for the monitoring of machinery and inventories, and real-time reporting to the secured creditors.

Cost reduction is another important factor, but many corporations will make the most of the existing asset and facility management systems to take movable properties as collateral. Systems connecting collateral administration and corporate financing may be incorporated into the whole systemic business administration.

Consequently, productive effects of efficient collateral administration are expected as follows:

First, all types of movable properties will be regarded as useful security. So far, the value of movable property decreases sharply along with its life cycle. Its high mobility and difficulty of identification make collateral administration almost impossible. Enforcement of security interests could not ensure sufficient recovery of claims. Labor cost is another obstacle in collateral administration. All these problems can be settled by the IT-based solutions as mentioned above.

Second, the secure control and monitoring of collateral will enhance its value, and more loanable funds are available to SME borrowers. Creditor banks had better take advantage of outsourcing specialized services of collateral administration.⁵³⁾

Third, accumulated data on collateral will give rise to new value-added services like prevention of theft, real-time reconciliation of the status quo collateral with the original registration, arrangements for sale or exchange of second-hand machinery, evaluation and management of collateral assets, and so on. It will be followed by creation of new jobs and

53) Collateral administration including the operation of AIDC devices may be entrusted to a collateral administrator, whose duty is to file necessary registration with the Registrar for the interest of the secured creditor, to manage databases by means of AIDC devices. The most important job is to survey the status quo collateral and to report any discrepancy at the request of such secured creditor.

high-technology movable property management services.⁵⁴⁾

Finally, successful implementation of the new collateral regime on movables and receivables is expected to promote export of Korean legal systems as well as hardware and software for collateral administration and IT labor forces to foreign countries, which have adopted movable properties as collateral. Most of all, being informed of the benefits of new collateral administration methods, such transition economies as China, Vietnam, Mongolia, Uzbekistan, Kazakhstan, etc. will be interested in the Korean legal regime and administration of collateral.

54) Whon-Il Park, "RFID-attached Machinery Will Make It Possible for a Factory to Expand Its Collateral Pool Demanded by Creditor Banks", *Korean Journal of Financial Law* Vol.1 No.2, December 2004, p. 185.

새 법제 하에서 동산담보관리의 효율화 방안

기업이 동산, 매출채권, 지적재산권을 채권자에게 담보로 제공하고 자금을 빌릴 수 있는 「동산·채권 등의 담보에 관한 법률」이 법원의 전자등기 시스템 구축 준비기간을 거쳐 2012년 6월 11일부터 시행될 예정이다. 이에 따라 중소기업과 자영업자들도 자금조달이 훨씬 용이해질 것으로 기대된다.

본고는 새 법률이 담보목적물의 현황조사에 전자식별표지를 쓸 수 있게 한 것을 계기로 채권은행의 입장에서 동산담보관리에 RFID/USN 기술을 도입할 것을 제안하고 있다. 첨단 RFID 시스템을 이용하면 개별 동산 고유의 ID 확인, 동일성 점검, 이력관리가 가능하고, USN 기술의 센싱 기능과 위치 파악 기능을 통해 중소기업에서 사용 중인 설비의 전반적인 운용현황을 파악할 수 있으며, 실시간으로 채권은행에 현황보고를 할 수 있기 때문이다. 동산담보관리 모델은 현재 기업에 널리 보급되어 있는 자산 및 설비관리 시스템을 거의 그대로 이용할 수 있다. 자산관리와 기업금융 및 담보관리를 연계시킬 수 있으므로 체계적인 기업경영을 촉진하게 될 것이다.

그 결과 다음과 같은 효과가 기대된다. 첫째로, 중소기업 보유 동산의 담보활용도가 높아질 것이다. 종전에는 동산의 급속한 가치하락과 이동 가능성 등으로 담보권 실행을 통한 채권회수가 용이하지 않아 담보가치를 인정하기 어려웠다. 특히 경기하강 국면에서는 채권회수가 힘들어지는 문제도 있었다.

둘째로, RFID, QR코드 등 첨단 정보기술을 이용하여 담보목적물을 특정하고 통제할 수 있게 됨에 따라 동산담보로서의 가치를 인정받고 그 만큼 은행대출도 크게 늘어날 전망이다.

셋째로, 담보목적물에 관하여 축적된 데이터베이스는 담보관리 및 처분에 있어서 새로운 고부가가치 서비스를 창출할 수 있다. 정보기술을 활용하여 전문적인 서비스를 제공하는 등 ‘u-동산담보관리’라는 새로운 지식기반 서비스 사업이 출현하는 것도 기대할 수 있다.

끝으로 동산·채권담보법을 성공적으로 시행함으로써 우리나라와 같은 담보관리 서비스 및 정보기술 인력의 수출까지도 모색할 수 있다. 동산담보제도를 채택하고 있는 중국, 베트남, 몽골, 우즈베키스탄, 카자흐스탄 등 여러 체제전환국에서도 우리 못지않은 경제적인 편익이 예상되기 때문이다.

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