



The Main Contents, Comment and Future Task for the Space Laws in Korea

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Abstract

Korea now has a rapidly expanding space programme with exploration aspirations.

The government is giving priority to the aerospace industry and, to put it on a better footing, enacted an Aerospace Industry Development Promotion Act in 1987, a Space Development Promotion Act in 2005 and a New Space Compensation for Damage Act in 2007. I would like to describe briefly the legislative history, main contents and comment for these three space acts including especially launch licensing, registration of space objects, use of satellite information, astronaut rescue, liability for compensation, third party liability insurance and establishment of committee and plans to assist the Korean space effort.

Furthermore author proposed to legislate a draft for the establishment of a new Korean National Space Development Agency (KNSDA: tentative title) to create a similar body to Japan Aerospace Exploration Agency (JAXA), British National Space Centre (BNSC) of UK, French Centre National d'Etudes Spatiales (CNES), German Aerospace Center (DLR), Swedish Space Corporation, China Aerospace Science and Industry Corporation, Indian Space Research Organization (ISRO) as well as the

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Korean Space Agency (KSA: Tentative title) to create a similar body to Canadian Space Agency, European Space Agency, Russian Space Agency, Italian Space Agency, Israel Space Agency, Indian Department of Space, National Aeronautics and Space Administration (NASA) of USA, China National Space Administration in order to develop efficiently space industry.

A call is made for Asian countries to unite and further their space development through a regional space agency.

1 Introduction



The Ministry of Education, Science and Technology announced that Yi So-yeon, Korea's first astronaut, will return to Earth aboard the Soyuz TMA-11 Spaceship (Russia) on April 19, 2008 after accomplishing her space missions at the International Space Station (ISS) for 10 days, which maintains an altitude of 350 kilometers from Earth.¹⁾ The successful entry into orbit makes Korea the 36th country to send a person into orbit.

Miss Yi So-Yeon, a 29-year-old bio systems engineer and the 49th woman to reach space, is the second Asian woman to make a space flight after a Japanese woman astronaut made two trips in the 1990s.

Yi blasted off into space on the Soyuz TMA-12 on April 8, drawing much public interest and support. Since then, she has been onboard the ISS for 10 days, carrying out her mission of 18 scientific experiments. During the visit to the ISS, she has promoted Korean culture worldwide through her mission of having Korean-style dinner in space and a performance using the national flag Taegyeukgi performance while giving.

This has provided young Koreans hope and dreams toward space. They will also lead to the accumulation of manned space technology and the experience needed for the space industry and science in the future. The successful mission completion has led to the growth of Korean people's interest in space.

The Ministry of Education, Science and Technology said on November, 2007 that it plans to send an unmanned probe to orbit of the Moon in 2020 and to land another on its surface in 2025. According to the roadmap of South Korea's space exploration projects, the Ministry will also develop a large-

size rocket that can carry 300 tons of freight into space by 2017, and will start to

1) <http://english.chosun.com/w21data/html/news/200804/200804190001.html>

build a space shuttle launching system in 2020. However, the Ministry didn't reveal how much the space projects will cost, or how they will be funded. Detailed plans will be fixed later, it said.²⁾

The Korea Space Centre is also Korea's first space port completed at the end of 2008 at Woinarodo, Goheung county, Junlanam Province on the Southern coast of the Korean peninsula. The Korea Space Centre is expected to launch a Science Satellite-2 (100 kg) in using a Korea Science Launch Vehicle 1 into space on December 21, 2008 and become the 13th country in the world to launch a rocket into space on its own.

The Space Port will be operated by the state-run Korea Aerospace Research Institute (KARI)³⁾ and will include launch tower, control tower, rocket assembly and test facilities and space simulators. The Korea will be able to achieve its goal of building a satellite and rocket with indigenous technology and launching them into space from their own launch center into space on its own. This year's launching event will be meaningful, as only eight countries have been able to successfully send a launch vehicle into space.

Space has become an important sector in Asia, which will develop with greater rapidity in the 21st century. Thanks to the expansion of the private mobile communication industry, an increase in space exploration activities, and the implementation of the International Space Station (ISS) program, the industry will grow continuously and the market size of the global space industry is likely to see annual average growth of more than 10%.

For this reason the Korean government decided to actively foster the aerospace industry in 2008. In order to develop it more efficiently the Korean government revised the Mid-and Long-Term National Space Development Basic Plan with a resolution of the National Science and Technology Council on 17 May 2005.

Korean space policy is based on the national space programme and the following three space Acts.

The space relationship law in Korea where it is classified with three branches is ① Aerospace Industry Development Promotion Act of 1987, ② Space Development Promotion Act of 2005 and the ③ Space Damage Compensation Act of 2007. These three branch Acts is related to development promotion of aerospace industry in Korea and to the objective which controls rationally an accident prevention and a compensation for damage.

2) <http://www.rjkoehler.com/2007/11/21/korea-to-launch-moon-probe-by-2020>

3) <http://www.kari.re.kr>

This article will present a legislative history, main contents, comments of these three Acts and space policy in Korea, examples of foreign countries' space legislation which has been used as a guide in formulating our own law. It will conclude by proposing the establishment of an Asian Space Agency (ASA). First of all, I would like to describe briefly the legislative history, main contents and comment of these three Acts as the followings;

2 The Main Contents and Comments of the Aerospace Industry Development Promotion Act

The Aerospace Industry Development Promotion Act was passed by the majority resolution of the Korean National Assembly and then proclaimed with law no. 8852 by the Government on December 4, 1987. This Act has been amended thirteen times for 21 years until now and composed of 22 articles. The purpose of this Act is to contribute to the sound development of the national economy and the improvement of national life by supporting and promoting rationally the aerospace industry, and researching and developing efficiently aerospace science and technology. I would like to explain briefly the main contents of this Act as the following;

1) The Main Contents of the Aerospace Industry Development Promotion Act

(1) Establishment of the basic Plan on Aerospace Industry Development

In order to develop the aerospace industry, the Government shall establish the basic plan for the aerospace industry development including the following items;

1. Purpose and direction for the aerospace industry development,
2. Pushing systematization and strategy for the aerospace industry development,
3. Pushing plan for the aerospace industry development,
4. Comprehensive research system and research and development budget for the research and the development of the aerospace science and technology,
5. Supply of financial source and investment plan for necessitating to an aerospace industry development,
6. Training and education for the specialty manpower of the aerospace industry development
7. The international cooperation for the activation of aerospace industrial

development,

8. Other important matters concerning development of the aerospace industry.

The Government shall establish and execute each year the operational program in accordance with the basic plan established under paragraph 1 (Article 3).

(2) Fostering of the Aerospace Industry Development

The government shall push the execution of the operational program in order to foster the aerospace industry such as development of airplane for passengers or cargo, helicopter, airship, glider, remote pilotless vehicle, space launch vehicle, satellite, manned or unmanned spacecraft and the related apparatus and materials (Article 4).

(3) Designation and Support of Specified Businessman

The Minister of Knowledge Economy may designate items etc. as required to foster specially according to the basic plan under article 3 (Article 5).

(4) Performance and Quality Inspection

When an aerospace industry businessman or specified businessman produces aircraft, space flying object, apparatus or materials, he shall be subject to a performance and quality inspection of the Minister of Knowledge Economy.

The Minister of Knowledge Economy have to deliver a certificate of inspection to aircraft, spacecraft, apparatus or materials passed through the performance and quality inspection to them (Article 10).

(5) Restriction etc. on Use

Any aircraft, spacecraft, apparatus or materials not inspected under Article 10 shall not be used, except in case of use for test of flight (Article 11).

(6) Financial Support

The Government may support the long-term, low-interest fund and research and development expenses for the purpose of fostering the aerospace industry and researching and developing the aerospace science and technology and holding and management of the exhibition relating to the aerospace science and technology (Article 12).

(7) Lending etc. of State-Owned Facilities, Apparatus etc.

Notwithstanding the provisions of the State Properties Act, if it is necessary for the research, development or production of aircraft, satellite, space launch vehicle, manned or unmanned spacecraft, apparatus or materials, the Government may, gratuitously or onerously, lend or concede State-owned facilities, apparatus, etc. to an aerospace industry businessman or have him use or benefit by it (Article 13).

(8) Establishment of Aerospace Industry Development Policy Council

In order to deliberate matters concerning the establishment of the basic plan and coordination of the accompanying important policies of the Government and main affairs among ministries and agencies, the Aerospace Industry Development Policy Council is established and placed under the control of the Prime Minister (Article 14).

(9) Composition of Aerospace Industry Development Policy Council

1. The Council shall compose of no more than fifteen members including the chair.
2. The chair of the Council shall become the Prime Minister and members the Council shall determine by the Presidential Decree.
3. In order to take proper measures in case where a coordination of affairs, cooperation etc. between the civil and military sectors are deemed necessary, the chair of the Council may establish and operate an committee under the conditions as prescribed by the Presidential Decree.(Article 16)

10) Hearing

Where the Minister of Commerce, Industry and Energy cancels the designation of specified businessman as referred to in Article 8, he shall hold a hearing. (Article 17, paragraph 2).

2) The Comment for the Aerospace Industry Development Promotion Act

This Act has been carried out an important role for twenty years to develop the aerospace industry in Korea. The Ministry of Knowledge Economy has been supported for long time the long-term, low-interest fund and research and development expenses to the civilian enterprises and institutes for the purpose of fostering the aerospace industry and researching and developing the aerospace science

and technology according to the this Act.

This Act will be played continuously the role of the financial support for the production and research of the aircraft, airplane for passengers or cargo, helicopter, remote pilotless vehicle, satellite, space launch vehicle, manned or unmanned spacecraft and the related apparatus and materials in future.

3 The Legislative History, Main Contents and Comments of the Space Development Promotion Act

1) The Legislative History for the Enactment of the Space Development Promotion Act

The Korean government proclaimed a New Space Development Promotion Act in May 2005 in order to control the systematic promotion of space development, to manage the launch of space objects and to produce guidelines for handling compensation for damage caused by space accidents.

I argued the need for Korea to enact a space law such as "Space Development Promotion Act" to the KARI and the Korean government in a paper subsequently translated into Japanese and published in the Japanese Academic Journal *KiYo* in September 2003.⁴⁾

As space development involves large amounts of expense and high risk as a national strategic and public industry, the Korean government has recognized the need to establish the legal basis for it and to promote the fundamental space development and promotion plan systematically and efficiently every five years. The Ministry of Education, Science and Technology will seek the legislation of the "Space Development Promotion Act", which includes the designation of an aerospace authority and safety guidelines for future policy on space exploration projects.

For this reason, the Korean government in 2004 proposed to the National Assembly a "Draft for the Space Development Promotion Act" in order to provide systematic legal assistance for the space industry.

The Draft was passed by the State Council of the Korean government on December 21, 2004 and submitted to the National Assembly. The Draft was passed by majority resolution of the National Assembly on May 3, 2005. The National

4) Doo Hwan Kim, "Necessity for enacting the space law in Korea. Japanese Academic Journal *Kiyo*; 4(1), Proceedings of the Research Institute of Social Systems of Chuogakuin University, Chiba-ken, Japan, at 39-52.

Assembly transferred the Korean Space Development Promotion Act (hereafter the Korean Space Act) to the government on May 17, 2005, and the government proclaimed it with law no. 7538 on May 31, 2005. It came into force six months after the proclaimed date, on December 1, 2005.

The Act is in accordance with Korea's international obligations under the various UN space treaties and conventions such as a Space Treaty of 1967,⁵⁾ Rescue Agreement of 1968,⁶⁾ Liability Convention of 1972⁷⁾ and Registration of 1975⁸⁾.

As mentioned above, it introduced a licensing regime for space activities carried out on by Korean nationals and companies. The Act also prescribes the establishment of two organizations, namely the National Space Development Council and the Investigation Committee for Space Launching Accidents.

In order to launch space objects and to manage the new space center in Korea and carry out the duty of supervision of the states regulated by international treaty as a space developing country, the Korean government has established the legal basis for systematically and efficiently carrying out its fundamental space development and promotion plan.

The Korean Space Act is composed of 29 Articles and mainly covers the following items:

- establishment of two organizations: the National Space Development Council and the Space Accident Inquiry Committee;
- government responsibilities;
- establishing a basic plan for promoting space development;
- designation of a space development institute for space exploration;
- domestic and international registration of space objects;
- management of a space objects registry ledger;
- licensing of space launch vehicles and cancellation of launch licenses;
- liability for compensation for damages as a result of space accidents;
- utilization of satellite information and support of civilian space exploration projects;
- rescue of astronauts and restitution of space objects;

5) Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the moon and other Celestial Bodies.

6) Agreement on the Rescue of Astronauts, the Return Astronauts and the Return of Objects Launch into Outer Space.

7) Convention on International Liability for Damage Caused by Space Objects.

8) Convention on Registration of Objects Launched into Outer Space.

- penalty clauses, etc.

The main contents of the new Act are discussed in the following section.

2) The Main Contents of the Space Development Promotion Act

(1) Purpose

The purpose of this Act is to promote the peaceful use and scientific exploration of outer space, to ensure national security, to further develop the national economy, and to raise the national standard of living through the systematic promotion of space exploration and the effective use and management of space objects (Article 1).

(2) Government Responsibilities

The Korean government shall carry out space exploration in conformity with space treaties concluded with other countries and international organizations, and shall use outer space peacefully (Article 3).

(3) Establishing of a Basic Plan for Promoting Space Development

The Korean government must design a basic plan for promoting space development (hereafter referred to as Basic Plan) and using and managing space objects. The Korean government develops a Basic Plan every five years and confirms it through deliberations of the National Space Committee (Article 5).

(4) Establishing of National Space Committee

The National Space Committee (hereafter called the "Committee") is placed under the control of the President to deliberate provisions regarding space exploration including establishing the Basic Plan, etc. The Committee is composed of no more than fifteen members including the Chair. The Minister of Education, Science and Technology becomes Chair of the Committee. The Council has a Practical Affairs Subcommittee for Space Development Promotion to carry out its affairs effectively; the Vice-Minister of Education, Science and Technology assumes the Chair of this Subcommittee (Article 6).

(5) Designation of Space Development Special Institute for Space Exploration

The Minister of Education, Science and Technology can designate a Professional Organ for Space Exploration (hereafter referred to as the "Professional Organ") for systematically and effectively supporting the space exploration project. Necessary working parameters and financial support for the Space Development Institute are set

by Presidential Decree (Article 7).

(6) Domestic Registration of Space Objects

If Korean citizens (including legal entities) wish to launch space objects in a domestic or foreign country, a preliminary registration must be made to the Minister of Science and Technology in accordance with Presidential Decree 180 days before the scheduled launch date.

If the Minister of Education, Science and Technology investigates the launch plan and concludes that the launch plan does not demonstrate adequate liability of compensation for damages, he can demand further revisions to them.

Any person, who makes a preliminary registration of space objects, must then formally register the space objects to the Minister of Education, Science and Technology (MEST) within 90 days after the space object reaches its planned orbit (Article 8).

(7) International Registration of Space Objects

If there is a registration of space objects, the Minister of Science and Technology must register it to the United Nations by way of the Minister of Foreign Affairs and Trade in accordance with the Convention on Registration of Objects Launched into Outer Space (Article 9).

(8) Management of Registered Ledger for Space Objects

The MEST must keep and manage the preliminary registry and the formal registry ledger of space objects (Article 10).

(9) Licensing of Space Launch Vehicles

If a person wishes to launch a space launch vehicle in a domestic or foreign country, he must obtain a license from the MEST.

Any person who wants to obtain a launch license must submit the launch plan including a safety analysis report, the operational plan of payloads, and the plan for liability of compensation for damages to the Minister of Education, Science and Technology.

When the Minister of Education, Science and Technology grants a launch license, he has to consider the following subsections.

1. purpose of space launch vehicles,

2. the safety management of space launch vehicles,
3. insurance of liability for damages in the case of space accidents,
4. other items including the necessary items for launch preparation, the transportation of space launch vehicles (Article 11).

(10) Cancellation of Launch License and the Hearing

The Minister of Education, Science and Technology may revoke a launch license under any of the following subsections,

1. in case of a delay in the launch for more than one year from the permitted launch date without due cause;
2. in case of obtaining a launch license by false means;
3. in case of demanding from a director of a related state administrative organs for the cancellation of the license in anticipation of serious threats to national security;
4. in the case of any abnormalities in safety including fuel leakage before launching by space launch vehicles or defects in the communication systems;
5. in case of failing to obtain a license for changes due to violations of Article 11 Section (1);
6. in case the person who receives the launch license of space launch objects does not conform to any part of Article 12 (Article 12).

(11) Liability of Compensation for Damages caused by Space Accidents

A person who launches space objects must bear the liability of compensation for damages caused by accidents to the space objects. The sphere of liability of compensation for damages and the limit of responsibility are specified by other laws (Article 14).

(12) Organizing of the Space Accident Inquiry Committee

The Minister of Education, Science and Technology may establish a Space Accident Inquiry Committee in order to investigate any space accident. The Space Accident Inquiry Committee will consist of 5 to 11 members chosen by the Minister of Science and Technology from specialists in related fields.

The Minister of Science and Technology will appoint a Chair among the members. However, in relation to the national security established by Presidential Decree, a separate Inquiry Committee can be composed according to Presidential Decree. The

Space Accident Inquiry Committee can request cooperation with the director of the related administrative organs in connection with the entrance and exit control to the area of space accident and other investigations of relevance.

Necessary provisions on the time of composition, qualifications of the members, operations, etc. of the Space Accident Inquiry Committee must be set by Presidential Decree (Article 16).

(13) Utilization of Satellite Information

The Minister of Education, Science and Technology can take action, such as designating or establishing an organization responsible for promoting the spread and practical use of satellite information gained by the artificial satellite developed in accordance with the basic plan. In this case, geographical information in accordance with the Act on the Structure and Utilization of National Geographic Information Systems is to be agreed upon with the Minister of Land, Transport and Maritime Affairs.

The Minister of Education, Science and Technology may provide funding for promoting the spread and practical use of satellite information within the limits of budgetary appropriation. The government should not use satellite information to infringe on the private lives of individuals (Article 17).

(14) Support of Civilian Space Exploration Project

The Minister of Education, Science and Technology should design policies such as the provision of human resources, tax benefits and financial support, and preferential purchase, etc. for attracting civilian space exploration projects and for enlarging civilian research and development investment (Article 18).

(15) Rescue of Astronauts:

The Korean government shall supply support in the case that an astronaut from a foreign space object makes an emergency landing, meets with a disaster, or is involved in an accident in Korean territory or neighboring high seas. The Korean government will assist the astronaut in returning to the country of launch, country of registration or international organization responsible for the launch of said space objects (Article 22).

(16) Restitution of Space Objects

In the case of foreign space objects falling to or making an emergency landing on

Korean territory, the Korean government must return the foreign space object to the launching state or registered country or international organization responsible for the launch (Article 23).

(17) Penalty Clauses

Any person not obtaining a license (including license on changes) in accordance with Article 11 and who launches a space launch vehicle is sentenced to imprisonment up to five years, or faces fines not exceeding 50,000,000 won (Article 27).

3) Comments for the Space Development Promotion Act

This Act has been carried out an important role for two years half to establish a basic plan for promoting space development, to maintain the space order such as a domestic and international registration of satellite, licensing of space launch vehicles, covering of liability insurance for satellites, organizing of the space accidents to utilize the satellite information and to support of civilian space development projects in Korea. In future, this Act will be played an important role such as fundamental law of space activities in Korea.

It is desirable for us that Article 15 (Third Party Liability Insurance) of the Space Development Promotion Act was deleted by cause of the enactment of Article 6 (Covering of the Liability Insurance on the Compensation for Damage) of the Space Compensation for Damage Act on December 21, 2007.

The Ministry of Knowledge Economy will be supported continuously the fund and research and development expenses to the civilian enterprises and institutes for the purpose of fostering the aerospace industry and researching and developing the aerospace science and technology according to the this Act. This Act will be played also continuously the role of the financial support for the production and research of the satellite, space launch vehicle, manned or unmanned spacecraft and facilities of the space launch site etc.

4 The Main Contents and Comments of the Space Damage Compensation Damage Act

- 1) The Legislative History for the Enactment of the Space Compensation for Damage Act

Though the legal basis of Draft for the Space Damage Compensation Act was based on the Article 14 of the Space Development Promotion Act, this Draft was purported with protection of the victims sustained by the space damage and quick solution standard between the dispute party by stipulating the compensation for damage scope and the liability limitation.

The Draft for the Space Damage Compensation Act was drawn up suitably and agreeably in the space situation and circumstance in Korea in considering the contents of Liability Convention of 1972, the legislative examples of the domestic acts relating to the space compensation for damage in the developed countries.

As twelve congressmen proposed the Draft for the Space Damage Compensation Act to the National Assembly on February 5, 2007, this Draft was discussed and deliberated by the Science, Technology, Information and Telecommunication Committee under the National Assembly on April 12, 2007.

The Space Damage Compensation Act was passed by the majority resolution of the Korean National Assembly and then proclaimed with law no. 8714 by the Government on December 21 2007. This Act takes effect six months from the date of promulgation. Therefore, this Act will be entered into force from June 22, 2008 according to the additional clauses 1 of the said Act. Finally this Act was enacted by the method of congressman's legislature. This Act composed of 8 articles. I would like to explain the main contents of this Act.

2) The Main Contents of the Space Compensation for Damage Act

I would like to explain briefly the main contents of this Act as the following;

(1) The Purpose of This Act

The purpose of this Act is to decide the compensation scope and the responsibility limit in case when the space damage occurs and to protect the victims and to contribute the healthy development for the space development projects (Article 1).

(2) Relation to the International Convention

If the government is to pay the compensation for damage to the foreign government according to "the Convention on International Liability for Damage Caused by Space Objects", the government will be able to demand the recourse to launcher of space objects.

This Act may exclude and limit the application for the individual of state, legal

person, association or government forbidden and limited the Korean national, legal person and Association established by the Korean law of Korean government sustained by the space damage

(3) Strict Liability and Channeling of Liability etc.

If the space damage occurred, a person who launch the space object shall be strictly liable to pay compensation for damage caused by the space accidents. But a person who launch space object is not liable for space damage caused by the armed collision among the states, hostile act, civil war or rebellion and damage occurred in space except with the intention or fault.

A person who launch the space object may demand the recourse to the third parties caused by the space damage with intention or negligence according to the said paragraph of this article. Against a space damage it does not apply "the Products Liability Act (Article 4).

(4) Limited Sum of the Compensation for Damage

The limitation of liability for a person who launch the space object shall compensate is limited to the sum of 200 billion Won (Article 5).

(5) Covering of the Liability Insurance on the Compensation for Damage

A person who wants to obtain a launch permission of space launch vehicles according to Article 11 of "the Space Development Promotion Act" must join to the third party liability insurance for the purpose of compensating for damage in consideration of the possibility of an accident occurring.

The Minister of Education, Science and Technology shall gives notice on the insured amount covered compulsorily in accordance with 1 paragraph of this article within the extent of the limited liability sum on the compensation for damage after deciding in considering the peculiarity of space object, degree of difficulty, around circumstance of a launching site, the domestic and foreign insurance market etc. (Article 6)

Especially, a person who wants to get the permission of launching must join to the liability insurance till the smallest limit amount of liability according to the article 9 of the Enforcement Regulation of Space Development Promotion Act as the following;

1. less than the weight on board 1 tons : 40,000,000 unit of account⁹⁾,

2. more than the weight on board 1 tons : 60,000,000 unit of account.

(6) Measures of the Korean Government

The Korean government shall enforce the necessary measures in order to assist victims and to prevent the increase of damage in the case where the space damage occurs.

The Korean government may give the necessary assistance to a person who launches the space object when admitted necessarily in order to carry out the purpose of this Act in case of the sum of compensation for damage compensated dutifully by a person who launches the space object in accordance with Article 4, paragraph 1 of this Act will be exceeded the insured amount prescribed Article 6, paragraph 2.

When the government supported to a person who launches the space object in accordance with this Article, paragraph 2, it does assisted within the scope which is permitted according to the decision of National Assembly (Article 7).

(7) Term of the Extinctive Prescription for the Right Execution

The right to claim of the compensation for damage according to this Act shall extinguish by prescription if not exercised within one year from the time when the injured party or his representative becomes aware of such damage and the identity of the person who bore the liability of the compensation for damage (Article 8).

3) Comments on the Space Compensation for Damage Act

(1) Adoption of a New Definition Spaceworthiness

It is necessary and desirable for us to adopt a new definition Spaceworthiness in order to prevent the space accidents in advance and to keep the safety in launching satellite, space launch vehicle or spacecraft within this Act.

A person who launches the space object shall be liable before and at the beginning of the launch to exercise due diligence to ;

a) make the satellite, space launch vehicle or spacecraft space-worthy,

9) The standard unit of account for the monetary and financial statistics is the national currency unit. A unit of account is a standard monetary unit of measurement of the market value/cost of goods, services, or assets.

b) properly man, equip and supply the satellite or spacecraft,

Furthermore a person who launches shall liable for personal or property damage sustained by third parties to surface of the ground upon condition only that the damage was caused by a satellite, space launch vehicle or spacecraft in launch.

[Legislative Examples of Treaty, Korea and Japan]

International Convention for the unification of certain rules of law relating to bills of lading (1924) Article 3, The Korean Commercial Code, Article 794 and Japanese Commercial Code, Article 738.

(2) Exclusion of Strict Liability for Damage Caused by the Wilful-misconduct

Though it is desirable for us to adopt the strict liability to assailant in order to protect the injured persons and victims sustained on the surface of the ground by the launching accidents of satellite, I think that it is necessary to exclude the strict liability if the personal or property damage is caused by the wilful-misconduct or gross negligence of a person who launches the space objects.

The Article 4 and 5 of this Act shall not apply if it is proved that the damage resulted from an act or omission of a person who launches space objects, its servants or agents, done with intent to cause damage or recklessly and with knowledge that damage would probably result.

[Legislative Examples of Treaty, Korea and Japan]

Article 25 of the Warsaw Convention of 1929, Article 13 of the Hague Protocol of 1955, Article 22 of the Convention for the Unification of Certain Rules for International Carriage by Air (Montreal Convention) of 1999, Article 4 of the Convention on Limitation of Liability for Maritime Claims of 1976, Article 8 of the United Nations Convention on the Carriage of Goods by Sea (Hamburg Rule) of 1978, Article 21 of the United Nations Convention on International Multimodal Transport of Goods of 1980, Article 769, 797 of the Korean Commercial Code of 2007, Article 13 paragraph 2 of the Japanese International Commodity Transport Act of 1992,

(3) The Joint and Several Liability of the Legal Person for Space Accidents

If two or more persons who launches space objects will be occurred the space damage caused by space accidents, it is necessary to insert an article that which the said two or more persons shall bears the joint and several liability to victims and

sufferer on the compensation for the personal or property damage.

(4) Change from Korean Won to the Unit of Account on the Limited Sum of the Compensation for Damage

Most of the international maritime and aviation treaties as well as the Korean Commercial Code, Japanese International Commodity Transport Act, German Air Transport Act (Luftverkehrsgesetz) and Civil Aviation Law of the People's Republic of China had been adopted the Special Drawing Right (SDR)¹⁰⁾ or Unit of Account for the compensation for damage caused by the maritime accident or aircraft accident since 1975. As the launching accident of the space object is a possibility which will occur even from the domestic territory as well as the circumference nations, so it is indeed a great desirable to adopt the unit of account (SDR) as a calculation unit system which is officially recognized with the international in the compensation for damage caused by the space accident.

The sums mentioned in terms of Special Drawing Right shall be deemed to refer to the Special Drawing Right as defined by the International Monetary Fund under the United Nations. Conversion of the sums into national currencies shall, in case of judicial proceedings, be made according to the value of such currencies in terms of the Special Drawing Right at the date of the judgement.

The value of a national currency, in terms of the Special Drawing Right, of a State Party which is a Member of the International Monetary Fund, shall be calculated in accordance with the method of valuation applied by the International Monetary Fund, in effect at the date of the judgement, for its operations and transactions.

I would like to propose the replacement an Article 5 of this Act as the following ;

The limitation of liability shall compensate by a person who launches space object is limited to the sum of 200 billion unit of account (Article 5).

[Legislative Examples of Treaty, Korea and Japan]

10) The Special Drawing Right (SDR) is an international reserve asset, created by the IMF in 1969 to supplement the existing official reserves of member countries. SDRs are allocated to member countries in proportion to their IMF quotas. The SDR also serves as the unit of account of the IMF and some other international organizations. Its value is based on a basket of key international currencies. The Exchange rates in terms of SDRs are also available online.; <http://www.imf.org>

Article 2 of the Montreal Additional Protocol No.1, No.2, No.3 and Article 22 of the Montreal Protocol of 1975, Article 22–23 of the Montreal Convention 1999, Article 6 of the Convention on Limitation of Liability for Maritime Claims of 1976, Article 6 of the Hamburg Rule of 1978, Article 18 of the United Nations Convention on International Multimodal Transport of Goods of 1980, Article 770, 797 of the Korean Commercial Code of 2007, Article 13 of the Japanese International Commodity Transport Act of 1992, Article 45–46 of the German Air Transport Act (Luftverkehrsgesetz) of 2007, Article 129 of the Civil Aviation Law of the People's Republic of China.

(5) Recognizing of the Right to Receive the Preferential Payment

In order to protect the victims and sufferer, it is necessary to supplement a regulation relating to the recognition the right to receive preferential payment than another claims in the amount of compensation for damage caused by the space accident.

(6) Establishment of the "Space Compensation for Damage Deliberation Commission

I would like to propose that it is necessary to insert an article relating to the establishment of the "Space Compensation for Damage Deliberation Commission" in order to adjust and solve quickly the space disputes between an assailant and victims.

5 Future Task for the Space Policy and Possibility of Establishing an Asian Space Agency

Korea has been carrying out its space program step by step in accordance with its national space plans. Several accomplishments in 2005~2007 marked a milestone in Korean space technology development, culminating in the Korean Space Act. Korean nationals and companies who intend to launch or procure the launch of a space object, operate a space object or carry on any other activity in outer space will need to make themselves familiar with the provisions of these Acts.

It is indeed greatly desirable for us to establish a new space development agency in order to develop our space industry efficiently in future.

In my opinion, we should also legislate a draft for the establishment of a new Korean National Space Development Agency (KNSDA: tentative title) to create a similar body to Japan Aerospace Exploration Agency (JAXA)¹¹⁾, British National Space Centre (BNSC) of UK¹²⁾, French Centre National d'Etudes Spatiales (CNES

11) <http://www.jaxa.jp>

)¹³⁾, German Aerospace Center (DLR)¹⁴⁾, Swedish Space Corporation¹⁵⁾, China Aerospace Science and Industry Corporation¹⁶⁾, Indian Space Research Organization (ISRO)¹⁷⁾ or the Korean Space Agency (KSA: Tentative title) to create a similar body to Canadian Space Agency¹⁸⁾, European Space Agency¹⁹⁾, Russian Space Agency²⁰⁾, Italian Space Agency²¹⁾, Israel Space Agency²²⁾, Indian Department of Space²³⁾, National Aeronautics and Space Administration (NASA)²⁴⁾ of USA, China National Space Administration²⁵⁾ in order to develop efficiently space industry.

If the Korean government will be establish the Korean Space Agency as an governmental organization in future, it is necessary to revise the contents of the Government Organization Act.

If the Korean government will be created the Korean National Space Development Agency as a national enterprise in future, it is also necessary to enact the Draft for the Korean National Space Development Agency in advance.

Such a Draft for the Korean National Space Development Agency Act should include the following items: ① purpose of establishment, ② legal personality and capital, ③ business plan, budget and statement of account, ④ main office, ⑤ executives (directors and auditors) and employees, ⑥ scope of space activity, exploitation and exploration, ⑦ respect for the characteristics of academic research, ⑧ conclusion of insurance contract relating to the launch of satellites and space launch vehicle, ⑨ disposition of reserve fund, ⑩ gratuitous use and leasing of national property, ⑪ issue of debenture, etc.²⁶⁾

From now on Korea anticipates accomplishing its space programs proactively.

Korea also will continually strengthen exchanges and cooperation with all the

12) <http://www.bnsc.gov.uk>

13) <http://www.cnes.fr>

14) <http://www.dlr.de>

15) <http://www.ssc.se>

16) <http://www.casic.com.cn>

17) <http://www.isro.org>

18) <http://www.space.gc.ca/asc/eng/default.asp>

19) <http://www.esa.int/esaCP/UnitedKingdom.html>

20) <http://www.federalsspace.ru/index.asp?Lang=ENG>

21) <http://www.asi.it/SiteEN/Default.aspx>

22) <http://www.most.gov.il/English/Units/Science/Israel+Space+Agency>

23) <http://www.nstmis-dst.org/gib/dos.htm>

24) <http://www.nasa.gov>

25) <http://www.cnsa.gov.cn/n615709/cindex.html>

26) Doo Hwan Kim, Example Legislation on the Space Relations of Every Countries in the World and Main Contents of the Space Exploration Promotion Act and Future Task in Korea, The Korean Journal of Air and Space Law (Vol.20, No.1, June 2005), at 35-36.

countries in the world under the principle of equality, friendly relations and mutual benefits. Together with all other peoples around the globe, Korea will make due contribution towards the peaceful utilization of space resources and promotion of human progress and prosperity.²⁷⁾

Since its foundation in 1989, KARI has expanded its international cooperation in the aerospace field to 28 organizations in countries including the USA, Russia, the UK, France, China, Israel, etc. Through collaboration, KARI has improved its R&D capabilities. Korea is also trying to participate in the ISS program. KARI has been in discussion with NASA over the joint ACCESS mission. At the same time, talks with Boeing/NASA on participation in Zarya module in space shuttle are continuing.²⁸⁾

The idea of creating an Asian Space Agency (ASA) is something that should be pursued in my opinion. As a preliminary procedure, a Draft for the Convention for establishing an ASA among the Asian countries needs to be drawn up.

The creation of an ASA would lead to a strengthening of the cooperation deemed essential by the Asian space community towards joint undertakings in space and would act as a catalyst for efforts in space exploitation and allow resources, technology, manpower and finances to be centrally managed in an independent fashion to the benefit of Asian countries. It will promote international cooperation among Asian States in space exploitation, research and technology, as well as their space application and developments, much like the European Space Agency does. This could be regarded as a new road for Asia's space policy and could also coordinate the broad thinking needed to meet new challenges in Asian countries.²⁹⁾

I believe that it should be possible to establish an electronic ASA like electronic government through the internet, as well as an electronic Asian Center for Space Law as a first step. Since the Asian air and space industry will become a very promising market in the 21st century, we can expect severe competition between the Asian countries and the developed countries, such as the USA, Russia, Canada, and the EU, who will be keen to occupy the Asian market.

To win this severe competition, it will be necessary for the Asian peoples to work together in union, to strengthen cooperation in research, and to establish friendly

27) http://www.cnsa.gov.cn/main_e.asp

28) Doo Hwan Kim, Korea's space development programme: Policy and law, *Space Policy* (Vol. 22, Issue 2, May 2006), Elsevier, Scotland, UK, at 110-117.

29) Doo Hwan Kim, Some Considerations on the Possibility of Establishing an Asian Space Agency, *Zeitschrift für Luft-und Weltraumrecht* (German Journal of Air and Space Law, 50 Jahrgang, Heft 3, March 2001), Institut für Luft-und Weltraumrecht der Universität zu Köln, at 397-408.

relations for the benefit of the air and space industry in all Asian countries.

Finally, a very important point is that a political drive, at the highest level, should be effected to mobilize states toward this initiative, possibly taking the form of a solemn statement by heads of state of Asian countries setting out objectives and prospects for the long term. It should be noted that this political drive will be necessary not only to set up the organization, but also during a subsequent period. Korea has enacted its Space Development Promotion Act and Space Compensation for Damage Act so as to become an excellent model in the Asian Countries.

The ASA could become a new road for Asia's space policy and could coordinate the broad thinking needed to meet new challenges in Asian countries. The ASA would provide a vision of Asia's future in space, and of the benefits for Asian people on the ground that satellites can supply. It could also develop the strategies needed to fulfill the vision, through collaborative projects in space science and technology.

It is desirable and necessary for us to establish an ASA, in order to develop our space industry, to strengthen friendly relations and to promote research cooperation among Asian countries, based on oriental ideology, ethics and creative ideas. If the heads of the Asian countries agree to establish ASA at a summit conference, I am sure that it will come about in the near future.