

## EXPLANATORY REPORT

### General Part

#### Main aspects of the draft:

Austria has ratified all of the five treaties on outer space between 1968 and 1984 (Outer Space Treaty, Federal Law Gazette No. 1968/103; Rescue and Return Agreement, Federal Law Gazette No. 1970/110; Liability Convention, Federal Law Gazette No. 1980/162; Registration Convention, Federal Law Gazette No. 1980/163; and Moon Agreement Federal Law Gazette No. 1984/286).

Since 1987, Austria has been involved as a member of the European Space Agency (ESA) primarily in space activities of that organisation. ESA has accepted the obligations of the outer space treaties on its part, so that there has not been an immediate need for action by Austria. For the first time, two small Austrian satellites are now going to be launched:

- The satellite 'TUGSAT-1', which was built by the Technical University of Graz in cooperation with the University of Toronto and financed by the Austrian Space Application Programme (ASAP) of the Austrian Federal Ministry for Transport, Innovation and Technology. The programme is being implemented by the Austrian Agency for Aeronautics and Astronautics (Agentur für Luft- und Raumfahrt - ALR) of the Austrian Research Promotion Agency (Österreichische Forschungsförderungsgesellschaft - FFG). The satellite shall be launched into outer space by an Indian PSLV-launch vehicle.
- The satellite 'UniBRITE', which the Department of Astronomy of the University of Vienna ordered from the University of Toronto in 2005. It was bought 'in orbit', i.e. it shall be built by the Canadian University and be launched into outer space by an Indian PSLV-Launch vehicle. After the positioning of the satellite in its orbit, the University of Vienna is primarily interested in the data which the satellite records.

Both of the satellites are so-called nano satellites (20x20x20cm in size, approximately 8 kg in weight). Together, they form the 'BRITE-Austria'-Constellation, which shall explore massive light stars through a precise star camera without interference of the Earth's atmosphere. Prospectively and ideally, these two satellites will be launched by the same launcher from India and be put into Low-Earth Orbit (600-900 km).

While, in the past, space activities have been carried out primarily by States, today, private and commercial entities are increasingly active in this field. According to the Austrian legal situation hitherto non-State entities are, however, not obliged to notify the Republic of their space activities. There is no obligation of authorisation. Therefore, the Republic would not be in the position to comply with its international obligation to authorise and supervise non-governmental space activities.

Although, as of now, only a few follow-up projects are anticipated in Austria (estimations by FFG/ALR: 2 to 3 satellites per 10 years), the further trend is supposed to be in the direction of an increase of small satellites. Small satellites are low cost in their development, have short development times and high repetition rates. They offer an ideal risk distribution and are particularly practical for training projects. US enterprises already offer satellites at a price of US\$ 8000 (launch included, end 2010). Furthermore, commercial telecommunication enterprises have gone over to develop, buy or operate satellites on their own part.

Various rights and obligations result for Austria from international treaties, in particular the Outer Space Treaty 1967, the Liability Convention 1972 and the Registration Convention 1975:

- According to the Registration Convention 1975, it is necessary to establish a national register where space objects are registered.
- Furthermore, it is necessary to notify the registry and pass on certain information to the United Nations, where a special international register is maintained.
- According to the Outer Space Treaty 1967, Austria is liable as a launching State (launching State is, inter alia, the State which procures the launching) for damage caused by its space object to other States Parties to the treaty or to its natural or juridical persons. For damage on Earth or on spacecraft in the course of flight, this liability is even independent of fault.

- Austria has, according to the Outer Space Treaty, to assure that its obligations under international space law are complied with both by States and by non-State actors (so-called 'responsibility'). Obligations under international space law are, in particular, the peaceful use of outer space, the prohibition of appropriation, the use of outer space in the interest of all mankind, the protection of the environment and the mitigation of space debris.
- The Outer Space Treaty in particular stipulates that non-governmental space activities must be subject to an authorisation procedure and must be supervised.

On the basis of the current legal situation it is not possible for the Republic, in case of international liability, to have recourse against the operators of space objects or to prescribe insurance. An authorisation procedure does not exist. It is also not possible to establish a register due to the absence of delegated powers therefor. Under the current legal situation, it would be solely possible to notify the United Nations of technical data of launched space objects, provided that the Republic gains knowledge of it.

The present draft law provides the basis for the implementation of the international obligations of Austria. Several States have already enacted national space acts in order to take account of the increasing privatisation and commercialisation of space activities. In Europe, these were lastly Belgium (2006), the Netherlands (2008), and France (2008). In other European States, similar acts are currently discussed (Germany, Italy, Czech Republic). Some European States enacted national laws for the regulation of space activities some time ago (Norway 1969, Spain 1974 [sic; correct is 1995], Sweden 1982, United Kingdom 1986). Furthermore, national space acts are existent also in the USA, the Russian Federation, Ukraine, Australia, Brazil, Hong Kong, Japan, South Africa and the Republic of Korea.

The national legal basis for the implementation of the international obligations under the outer space treaties shall be established by the present draft. Thereby, in particular, it shall be prevented that uncontrolled cases of damage and connected liability caused by unauthorised Austrian space objects occur.

In addition, the draft regulates the responsibility of the operator of a space activity and establishes the legal basis for the recourse against the operator, if the Republic of Austria has compensated the damage caused by a space object to the injured party.

### **Competence:**

A federal competence under Art. 10, letter 9, of the Austrian Federal Constitution Law (Bundes-Verfassungsgesetz, B-VG) is given (air space → outer space) (see Walter, *The Constitutional Basis for an Austrian Space Law*, in: Brünner/Walter [ed.], *Nationales Weltraumrecht – National Space Law*, [2008]), as well as Stadlmeier, *What's in a Register: Austria (Not) Doing Her Homework?* in: *ibid.*). Art. 10, letter 6, 'civil law' also represents a competence basis.

## **Special Part**

### **As to § 1 (Scope of application):**

According to Art. VI Outer Space Treaty of 1967, Austria is internationally responsible for 'national' space activities. Sentence 1 of Art. VI reads: 'States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the moon and other celestial bodies, whether such activities are carried out by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty.' Austria's responsibility encompasses the obligation to assure that State and non-State entities comply with the provisions of the Outer Space Treaty of 1967.

Para. 1 defines the territorial, material and personal scope of application of the law. The definition follows the general principle of public international law that a State may only be made responsible for such activities over which it can exercise territorial and personal jurisdiction (see Gerhard, *Article VI*, in: Hobe/Schmidt-Tedd/Schrogl [ed.], *Cologne Commentary on Space Law* [2009] 113-114).

**As to Para. 1, Letter 1:**

The application of the law to activities on Austrian territory corresponds to the territorial jurisdiction of Austria.

**As to Para. 1, Letter 2:**

This provision, on the one hand, confirms the general principle that vessels and airplanes registered in Austria are subject to Austrian law. On the other hand, it also clarifies that space activities which are carried out on the High Seas (such as those of the enterprise ‘Sea Launch’ between 1999 and 2009) or from an airplane (such as the launch of a space object from an airplane in the course of flight) are covered by the scope of application of the law if the vessels or airplanes are registered in Austria.

**As to Para. 1, Letter 3:**

Space activities of Austrian citizens are covered if they are active as ‘operators’ in the sense of the definition in § 2, Letter 3, that is, not if they only collaborate in space activities and do not act on their own account.

Juridical persons with a seat in Austria are juridical persons under private law as well as under public law, including territorial entities. Therefore, activities which are carried out by a Federal Ministry are also covered. Subsidiaries of foreign (commercial) legal entities are covered if they are registered within the commercial register.

Some States limit the personal scope of application of the space acts to areas that are not subject to the sovereignty of any State (Norway), or make it subject to international agreements (Belgium) or to respective secondary legislation (the Netherlands). The unrestricted personal scope of application, which is provided for in most other States (such as, for example, Sweden, South Africa, Australia, France, England, USA, ...) is, however, the preferable means (see Gerhard, Article VI, in: Hobe/Schmidt-Tedd/Schrogl [ed.], Cologne Commentary on Space Law [2009] 114), as otherwise control deficits could arise which prejudice the universal application of the law of outer space as possible. A potential overlap of several national laws due to competing territorial and personal ties does not represent a fundamental problem. As the case may be, several authorisations must be obtained. Private international law aspects have to be clarified under the rules of private international law.

**As to Para. 2:**

As private international law also regulates the scope of application of Austrian private law, the determination of the scope of application in the present law which also contains private law (see, for example, the recourse in case of liability under § 11) may get into conflict with private international law – seemingly at least. It is therefore necessary to clarify that the private law provisions of the act are not always applicable, if the conditions of § 1 are met. Rather, following the rules of private international law (for extra-contractual liability, this is the Rome II-Regulation) Austrian law is applicable (additionally).

**As to § 2 (Definitions):****As to Letter 1:**

The term ‘space activity’ is not defined in international treaties. It follows from State practice, however, that in any case it comprises the ‘launch’ of a space object, even though it does not take place in outer space but on Earth (see Gerhard, Article VI, in: Hobe/Schmidt-Tedd/Schrogl [ed.], Cologne Commentary on Space Law [2009] 108). Operation and control encompass the operative and technical control of the space objects, such as its supervision and steering (see the explanations as to the widespread term ‘operation and control’ in Gerhard, Article VI, in: Hobe/Schmidt-Tedd/Schrogl [ed.], Cologne Commentary on Space Law [2009] 109). The mere control over contents of satellite data, e.g. contents of television transmissions or internet pages, is not covered by this provision.

Further, the controlled de-orbiting of a space object is covered by the scope of application of the law.

**As to Letter 2:**

The term ‘space object’ is not defined in the outer space treaties. Art. 1 d) of the Liability Convention of 1972 and Art. 1 b) of the Registration Convention only clarify that the term ‘space object’ also includes ‘component parts of a space object as well as its launch vehicle and parts thereof’. According to State practice, the term ‘space object’ also encompasses objects, the launch of which are organised, attempted or carried out by humans (Kerrest/Smith, Article VII, in: Hobe/Schmidt-Tedd/Schrogl [ed.], Cologne Commentary on Space Law [2009] 140).

Where outer space begins, however, is neither physically unequivocally determinable nor internationally exactly defined. Nevertheless, the space above 110 km sea level is generally considered as ‘outer space’, while below 80 km, the national airspace of the State underneath is situated (Hobe, Article [I], in: Hobe/Schmidt-Tedd/Schrogl [Hg.], Cologne Commentary on Space Law [2009] 31). Austria delimits its airspace at an altitude at which aircrafts cannot any longer move by aerodynamic lift but only according to Kepler’s laws (§ 2, letter 48, of the Aviation Rules, Luftverkehrsregeln - LVR).

**As to Letter 3:**

The operator is the natural or juridical person that carries out or undertakes to carry out the space activities. It is not necessary that the operator carries out these activities ‘in his/her own name or on its own account’. This definition would allow for possibilities of circumvention and would not be in accordance with other Austrian legal provisions stipulating operator liability. The present formulation serves the uniformity of the liability provisions under civil law.

**As to § 3 (Authorisation):**

§ 3 contains a general obligation of authorisation of space activities. A mere notification is not sufficient. Both State and non-State space activities are subject to authorisation. Thereby, § 3 exceeds the obligation contained in the Outer Space Treaty of 1967. According to sentence 2 of Art. VI, the obligation to authorise only relates to non-governmental space activities: ‘The activities of non-governmental entities in outer space, including the moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty.’

For the development of a transparent and uniform handling of the authorisation practice, for ensuring the flow of information between the territorial entities as well as for the development and use of pertinent know-how within the Federal Ministry for Transport, Innovation and Technology, the inclusion of governmental space activities seems desirable and meaningful.

According to sentence 2 of Art. VI of the Outer Space Treaty of 1967, space activities have also to be supervised following the authorisation. The implementation of this obligation is to be found in §§ 7, 8, 13 and 14.

**As to § 4 (Conditions for authorisation):****As to Para. 1:**

Establishing conditions for the authorisation enables Austria to assume its international responsibility. In this way, it can be assured assure that Austrian space activities comply with international norms. In the examination of the conditions for authorisation, technical, legal and political aspects have to be considered. This requires, inter alia, finding an agreement with other Federal Ministries, such as the Ministry for European and International Affairs, the Ministry of Finance or the Ministry of Defence and Sports (see below, § 17). The conditions for authorisation are to be further specified by an ordinance of the Federal Ministry for Transport, Innovation and Technology.

**As to Letter 1:**

This condition shall ensure that the operator is economically and technically in the position to carry out a space activity and also to end it. Otherwise, serious problems and dangers might be generated which eventually the general public would have to bear.

**As to Letter 2:**

Space activities are dangerous activities. Possible risks which exceed the general abstract danger of space activities to the security of persons and things, or the public health, should be reduced to a minimum through the authorisation condition contained in letter 2. For this reason, compliance with technical standards must be assured. Which standards have to be complied with shall be laid down in the ordinance or, as the case may be, in the individual decision on authorisation (see below, para. 3).

**As to Letter 3:**

This condition enables to pay due regard to Austria's foreign policy and security interests. In particular, international obligations stemming from other areas of law have to be considered in this context. In the examination of this condition, an agreement with the Ministry for European and International Affairs has to be found.

**As to Letter 4:**

The avoidance of space debris is an important concern of all States and all operators of space activities. Therefore, a separate Art., § 5 (see below), has been formulated on the mitigation of space debris which emphasises this particular importance. The condition of letter 4 has therefore to be read and applied in combination with § 5.

**As to Letter 5:**

This condition is distinct from letter 4 in that it also encompasses other environmental contaminations, especially gasiform substances as well as radiation, which do not fall under the term 'space debris'. Letter 5 reflects the notion of environmental protection already embraced by Art. IX Outer Space Treaty of 1967, namely that States have to undertake studies in such a way as to avoid 'harmful contamination' or also 'adverse changes in the environment of the Earth resulting from the introduction of extraterrestrial matter'.

**As to Letter 6:**

This condition shall ensure that standards on orbital position and frequency allocation of the ITU that are necessary for the smooth functioning of the different space objects as well as terrestrial frequency use are observed. The orbital positions and frequency allocations of the ITU will be announced every 4 years in Section III of the BGBl. The respective current ITU-standards derive from the ordinance according to § 12.

**As to Letter 7:**

This authorisation condition is to be read and applied together with para. 4. It stands in close connection to the liability and recourse regulations which are laid out in more detail in § 11.

**As to Letter 8:**

An orderly termination is especially important for the mitigation of space debris. Following the termination of the space activity, factual and legal precautions need to be taken in a responsible manner in order to keep outer space as residue-free as possible and to hinder future space activities as little as possible. This shall ensure the sustainable use of outer space for future generations. Letter 8 has an independent meaning in addition to letter 4 and § 5 in so far as it encompasses, in addition to technical precautions, also economic and legal precautions ones.

**As to Para. 2:**

Evidence shall be provided by the operator in the form of project documentation. This shall demonstrate compliance with the respective technical requirements. The project documentation shall also enable the verification of requirements for the mitigation of space debris (see letter 4 and § 5). If the authorities need

expert opinions, the General Administrative Procedure Act 1991 (Allgemeines Verwaltungsverfahrensgesetz - AVG) is applicable.

**As to Para. 3:**

The AVG is applicable to the entire authorisation procedure. This includes the possibility to issue conditions and charges. Yet, para. 3 functions as a clarification and a signal that conditions and charges have to be expected. Also the time-limit for the obligation of the authority to decide reflects that of the AVG (§ 73 AVG) and serves clarification and transparency, especially with regard to possible non-Austrian applicants.

**As to Para. 4:**

In principle, the operator of a space activity needs to take out insurance to cover his liability. It has to be considered that, as regards the liability of the operator, the provisions of the General Civil Code (Allgemeines Bürgerliches Gesetzbuch, ABGB) and pertinent rules under other federal laws are applicable. With regard to the hazardous nature of space activities, the principles on liability for hazardous activities as developed by jurisprudence have also to be taken into account. Insurance therefore serves the potentially injured as well as the operator.

The provision on the exclusion and temporary limitation of extended liability shall ensure that the coverage also includes damages that arise after the termination of the insurance contract if the damage causing event occurs within the period of the upstanding insurance agreement. For example, the space object can be damaged or be otherwise become defective much earlier, for example during the launch or in orbit, but causes damage only years later – for example by an uncontrolled crash.

Apart from the operator, the Republic of Austria as a launching State is liable for damage caused on Earth or to an aircraft in flight under public international law (Art. II Liability Convention). The Republic is liable for damage caused in outer space – for instance through collision – only if the damage is due to its fault or the fault of persons for whom it is responsible (Art. III Liability Convention). The purpose of the liability insurance is therefore to protect the operator from damages claims by those injured but also to financially absorb the potential liability of the Republic of Austria.

Nevertheless, in certain cases, the obligation to insure may be waived. The Minister for Transport, Innovation and Technology can decide that insurance is not necessary if the space activity is in the public interest and if no or merely a low risk emanates from it and if the operator is a financially potent institution or organisation. For the scope of application of the present Federal Law, space activities in the public interest are those serving science, research or education. Such space activities that are anyhow mostly financed by public authorities can be exempted from the payment of insurance rates. The risk emanating from the space activity shall be assessed on the basis of expert reports, which the operator attaches to the application. If the respective space object burns up at the re-entry into the Earth's atmosphere, an extremely low risk for harm on Earth or for aircraft can be assumed. The criterion of the financial capacity of the operator shall give the applicant the opportunity to demonstrate that he possesses sufficient financial means to pay for the damage in case of liability. Thereby it shall be assured that the financial capacity of the operator to pay for the damage is not only existent at the time of authorisation but also at the time of the possible damaging event. Also the national space laws of other countries (for example France or the Netherlands) provides for this possibility.

The State can then take recourse against the operator on the basis of § 11. The State, however, is liable under public international law only towards other States and their nationals but not for damages suffered by its own nationals. The amount of 60 million Euro derives from the recourse limitation for damages on Earth or for aircraft during flight (see § 11) for which there is liability without fault. In case of fault, the recourse is without limitation, so that it is incumbent on the operator to take out also higher insurance. The highest possible amount of insurance on the market currently encompasses around 100 million Euros (2011).

Insurance shall not be prescribed if the Federal State itself acts as the operator of an outer space activity because the State is liable itself in that case.

**As to § 5 (Mitigation of Space Debris):**

The mitigation of space debris is an important concern of all States and operators of space activities. Therefore, the obligation to mitigate space debris plays an important role already in the conditions for authorisation in respect to § 4 letter 4. In this sense, § 5 and § 4 letter 4 have to be read and applied in conjunction. Furthermore, the obligation to mitigate space debris represents an ongoing obligation of the operator also after the authorisation.

The ‘internationally recognised guidelines for the mitigation of space debris’ mentioned are first and foremost the Space Debris Mitigation Guidelines 2002 of the Inter-Agency Space Debris Mitigation Committee (IADC) (see [http://www.iadc-online.org/Documents/Docu/IADC\\_Mitigation\\_Guidelines\\_Rev1\\_Sep07.pdf](http://www.iadc-online.org/Documents/Docu/IADC_Mitigation_Guidelines_Rev1_Sep07.pdf)). In the IADC Space Debris Mitigation Committee, the most important space agencies, such as NASA (USA), ESA (Europe), Roscosmos (Russia), CNES (France), ISRO (India) and Jaxa (Japan) are represented. It constitutes an international forum for the global coordination of activities in connection with artificial and natural space debris. The main goal is the exchange of information on research on space debris, the enabling of cooperation in the field of research on space debris, the examination of means for cooperation and the identification of measures for mitigating space debris. The ESA has aligned its ‘Requirements on Space Debris Mitigation for ESA Projects’ of 2008 with them [ESA/ADMIN/IPOL(2008)2, Annex 1]. Furthermore, the UNCOPUOS Space Debris Mitigation Guidelines of 2007 are also oriented towards them but in some details are somewhat more imprecise (see [http://www.oosa.unvienna.org/pdf/publications/st\\_space\\_49E.pdf](http://www.oosa.unvienna.org/pdf/publications/st_space_49E.pdf)).

The IADC Space Debris Mitigation Guidelines contain in particular the following specifications: ‘Limit Debris Released during Normal Operations’, ‘Minimise the Potential for On-Orbit Break-ups’, ‘Post Mission Disposal’ and ‘Prevention of On-Orbit Collisions’.

‘Debris released during normal operations’ refers to debris created during normal operation of the space activity. This concerns solid and fluid residue that, as space debris, can cause severe damage to other space objects.

**As to § 6 (Modification or termination of the Space activity):**

Para. 1 provides for a general obligation of notification for changes of the space activities which need to be or have been authorised.

Para. 2, sentence 1, ensures that the Federal Minister for Transport, Innovation and Technology is informed about the upcoming termination of the space activity. In this context, it is necessary to take into account that the end of the space activity is not in every case identical with the technical lifespan of the respective space object. The notification obligation concerns regular planned termination as well as exceptional, unplanned termination due to technical or economic difficulties. Thereby, the Federal Minister of Transport, Innovation and Technology is enabled to determine if further measures (as mentioned in the second sentence) need to be taken.

Para. 2, sentence 2, empowers the Federal Minister of Transport, Innovation and Technology to issue further instructions for a safe termination through Administrative Decision. This can be the transfer of all necessary data for determining the position and remote control of the space object. Thereby, future collisions with other space objects can be prevented. If the space object is manoeuvrable it can also be determined that it must be de-orbited or put into a ‘Graveyard-Orbit’ (an orbit that is either very distant or hardly used).

**As to § 7 (Revocation and modification of the authorisation):****As to Para. 1:**

The revocation of the authorisation represents a measure of supervision and control of the State of Austria in the sense of Art. VI, sentence 2, of the Outer Space Treaty of 1967. Whoever carries out a space activity without authorisation is to be fined between 20.000 and 100.000 Euro (see *infra* § 14, sentence 2).

**As to Para. 2:**

The Federal Minister of Transport, Innovation and Technology can determine conditions and charges to ensure the safe termination of the space activity (cf. also § 6). Similar provisions may be found in other outer space legislations (e.g. the Netherlands, Section 7, para. 3; France, Art. 9). An infringement is to be punished with up to 100.000 Euro (see *infra* § 14, sentence 1).

**As to Para. 3:**

This measure serves the safety during the continuation or termination of the space activity. The Federal Minister of Transport, Innovation and Technology can order an execution by substitution for this purpose. The execution by substitution has its legal basis in § 4 of the Administrative Execution Law 1991 (Verwaltungsvollstreckungsgesetz, VVG), BGBl. Nr. 53. The doctrine considers this as the execution of a fungible activity ordered by an administrative authority (Antoniolli-Koja, Allgemeines Verwaltungsrecht, 3. ed., [1996] 625). In industrial law, execution by substitution is applied relatively often. Execution by substitution is rarely regulated in substantive laws themselves, yet, there are also examples thereof, e.g. § 18a of the Science Organisation Act (Forschungsorganisationsgesetz, FOG), Federal Law Gazette No. 341/1981, § 3 of the State Territory Act (Staatsgrenzgesetz), Federal Law Gazette No. 9/1974, § 178 of the Mineral Resources Act (Mineralrohstoffgesetz, MinRoG), Federal Law Gazette No. 38/1999, § 41, para. 3 of the Weapons Act 1996 (Waffengesetz), Federal Law Gazette No. 12/1997 and § 18 of the Radiation Safety Act (Strahlenschutzgesetz, Federal Law Gazette No. 227/1969).

Such execution by substitution can also be found in other national space legislations (e.g. Belgium, Art. 11, § 5). Some States attach it to the conditions and requirements for the revocation of authorisation (cf. *supra*, explanatory comments to § 7, para. 2).

**As to § 8 (Transfer):**

The transfer of space objects from one operator to another (e.g. buying/selling of satellites) is a relatively recent phenomenon that has developed with the increasing privatisation and commercialisation of outer space activities. Therefore, there is no provision for it in the outer space treaties. Nevertheless, the continued authorisation and supervision by a State needs to be ensured *mutatis mutandis* in the case of a change of the operator.

The change of the operator requires authorisation. The authorisation of the change of operator is to be considered under the same conditions as the original authorisation of the space activity. In the authorisation process, certain charges can be provided for if the new operator is not covered by the scope of application of the Austrian Outer Space Act. This may include the exchange of information with the home State of the new operator as well as a possible clarification of obligations in the internal relationship. This is especially relevant with regard to registration and liability obligations which, according to the principle ‘once launching State, always launching State’, can not be transferred (see § 9). As the case may be, also agreements under public international law may be necessary, which the Republic can then prepare accordingly.

**As to § 9 (Registry):****As to Para. 1:**

This provision implements the obligation under Art. II (1), sentence 1, of the Registration Convention that provides: ‘When a space object is launched into earth orbit or beyond, the launching State shall register the space object by means of an entry in an appropriate registry which it shall maintain.’ It follows from this that a State has to establish a national space registry for entering into it those space objects for which it is the launching State.

**As to Para. 2:**

The obligation to register a space object is incumbent upon the ‘launching State’. According to Art. I, letter a) of the Registration Convention of 1975, a launching State is a ‘State which launches or procures the launching of a space object’ as well as ‘State from whose territory or facility a space object is



launched'. Austria regards itself as a launching State which 'procures the launching of a space object' whenever the launch requires authorisation under § 3.

As the outer space treaties do not regulate a change of operator, generally, the principle 'once launching State, always launching State' applies. Registration cannot be withdrawn. An additional entry into the registry of the UN is, however, possible in case of a change of operator (Schmidt-Tedd and Mich, Article VIII, in: Hobe/Schmidt-Tedd/Schrogl [Hg.], Cologne Commentary on Space Law [2009] 155-156). The respective States can conclude agreements amongst each other to clarify pertinent legal questions in their internal relationship.

**As to Para. 3:**

As the definition of the 'launching State' in the Registration Convention of 1975 implies up to three possible launching States, Art. II, para. 2, of that agreement provides that they shall jointly determine which of them shall register the object. There shall only be one registering State for every space object.

**As to Para. 4:**

This provision corresponds to Art. VIII Outer Space Treaty of 1967, according to which the State, in whose registry a space object is registered, shall retain jurisdiction and control over the object and over any personnel thereof, while in outer space or on a celestial body. Also before registration, Austria is considered to be the 'launching State'. Registration therefore only has a declaratory effect and merely clarifies the question of 'jurisdiction and control' in relation to other States. With regard to liability which is incumbent on all of the three possible 'launching States' under Art. V of the Liability Convention 1972, the registration has no relevance.

**As to § 10 (Registration and information)**

**As to Para. 1:**

According to Art. II, para 3, of the Registration Convention of 1975, the contents of each registry and the conditions under which it is maintained shall be determined by the State of registry concerned. Para. 1 contains the information which has to be furnished to the Secretary-General of the United Nations according to Art. IV of the Registration Convention, as well as additional information necessary and reasonable for the implementation of the law.

Para. 1, letters 1, 3, and 5 correspond to the wording of Art IV, para. 1, letters a), c), d) and e) of the Registration Convention. Para. 1, letter 2, is broader than the Registration Convention (Art. IV, para. 1, letter b) and entails the ITU frequency allocation number in addition to the appropriate designation of the space object and its registration number. The ITU frequency allocation number assigns a frequency to the space object and shall allow a clear identification of the space object.

Para. 1, letters 6 and 7 contain further information necessary and reasonable for the implementation of the law. Against the background of § 6, para. 1, letter 4 and § 6, para. 1, letter 5 of the Austrian Data Protection Act, it is essential that the accuracy and updating of the data is granted. Therefore, if the operator terminates his space activity and informs about this fact in accordance to § 10, para. 3 of the Austrian Outer Space Act, the data is no longer necessary for the meeting of the objectives for which it was sought and has to be deleted.

Para. 1 letter 8 clarifies that the Minister for Transport, Innovation and Technology may determine further information that shall be entered into the registry by ordinance. The need can arise as a consequence of changes in the technological state of art, on the one hand, and from obligations resulting from international law, European Union law and relevant decisions of international organisations, on the other hand. 'Decisions of international organisations' include also those that do not entail legal obligations but

only have the status of recommendations. An example is the Resolution on Recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects (UN GA 62/101) adopted by the UN General Assembly in December 2007 which contains recommendations for further information equally relevant for space activities and the international community of States. In implementation of these recommendations, the UN Office for Outer Space Affairs that maintains the UN Registry of Objects Launched into Outer Space on behalf of the Secretary General, has already elaborated a particular form (A/AC.105/C.2/2010/CRP.7). The States of registry may use this form for the registration of the mandatory and additional information.

**As to Para. 2:**

The information for the registry can be transmitted only after the successful start of the space object. Before that, it is uncertain whether the chosen orbit, in fact, was reached. After the successful launch and the reach of the orbit, however, the information shall be submitted without delay. Without delay in this case shall mean that the period between the successful launch and the reach of the orbit should not exceed one month.

**As to Para. 3:**

Modifications in respect of the space object are in particular the end of its operability, changes of the function, changes of the orbit or a change of operator.

**As to Para. 4:**

This provision implements Art. IV, para. 1, of the Registration Convention of 1975, according to which each State of registry has to submit the information indicated above to the Secretary General of the United Nations 'as soon as practicable'. The UN Register is maintained on behalf of the UN Secretary General by the UN Office of Outer Space Affairs in Vienna. It maintains a public online data base on its webpage in which the entries in the registry can be searched.

**As to § 11 (Recourse)**

The Republic of Austria is liable under the Liability Convention of 1972 according to the conditions determined in Art. II and III of (Federal Law Gazette No. 162/1980). On this basis, cases of absolute and fault liability are distinguished depending on where, or on which object, damage is occurs. If the damage occurs on the surface of the Earth or to an aircraft in flight (cf. § 11 Austrian Aviation Act), the State is absolutely liable (Art. II Liability Convention). The reason for the different liability regimes lies in the specific risk emanating from space objects in flight for aircrafts, persons and objects, in them as well as on the Earth's surface. This risk situation justifies a stricter liability without consideration of fault. In the relationship with each other, however, similar risks are emanating, so that fault liability shall apply. Therefore, the State is liable according to Art. III for damage to space objects or aboard of them 'elsewhere than on the surface of the Earth' only in case of fault. The phrase 'in flight' encompasses also movement in outer space in the sense of § 11, para. 3 of the Austrian Aviation Act (§ 11, para. 3 of the Austrian Aviation Act, Luftfahrtgesetz, LFG, provides: 'The following is considered to be in the course of flight: a) aircraft heavier than air from time that energy is used for lift off until the termination of the landing, b) aircraft lighter than air from the time of lift-off from the Earth's surface until the process of joining it anew has terminated.' [unofficial translation])

According to § 11, the Federal Government shall have the right of recourse against the operator as regards the amount of compensation paid.

If damage occurs on the surface of the Earth or to an aircraft in flight, the Federal Government may claim recourse in the amount of the insured risk, but no less than the minimum amount of insurance set out

under § 4, para. 4. This ceiling represents a limitation of the operator's liability by analogy to strict liability provided for in other special laws (e.g. Nuclear Liability Act of 1999). Hence the minimum amount per insurance claim in § 4, para. 4 results. If the operator has taken out insurance exceeding this amount, the amount of the insured risk shall be relevant for the recourse. The Federal Government shall thereby be reimbursed the maximum amount covered by the liability insurance.

The operator of a space activity is liable also for fault of its agents insofar they have caused damage. Agents are denoted those persons who collaborate in the space activity by choice of the operator. They do not have to be employees, but they have to be in a certain close relationship to the operator (in this regard, the jurisprudence on § 1319 of the Austrian Civil Code will have to be taken into consideration). Due to the hazardous nature of the activity and the massive damages that can be caused by a space object, it seems appropriate to provide for the operator's liability for any kind of fault of his agents.

If the operator or one of his agents may be blamed for fault, the obligation to reimburse shall be unlimited as regards its amount. In case of fault liability, the operator is liable – as provided for under national tort law – in principle without limitations, so that also the obligation to reimburse the Federal Government compensation payments effectuated pursuant to public international law obligations shall be unlimited. The same applies in case the operator has failed to comply with his obligations under §§ 3 (Authorisation) and 4 (Conditions for authorisation).

Entirely separated from the question of liability of the Republic of Austria under international law and the recourse to the operator is the question of the Federal Government's liability for sovereign actions under the Public Liability Act (Amtshaftungsgesetz).

In fixing the amount of the actual recourse claim shall be based upon the budgetary provisions (§ 62 BHG).

As regards the liability of the operator, the provisions of the General Civil Code (Allgemeines Bürgerliches Gesetzbuch, ABGB) and relevant provisions of other laws apply. It has also to be taken into account that due to the hazardous nature of space activities, the liability may be also determined in accordance with the principles on liability for hazardous activities as developed by jurisprudence.

#### **As to § 12 (Ordinance)**

According to Art. 18, para. 2 of the Federal Constitution Act (Bundes-Verfassungsgesetz, B-VG), every administrative authority can, on the basis of law, issue ordinances within its sphere of competence. Therefore, § 12 does not at all regulate the contents of these ordinances exhaustively. Rather, it summarises which further specifications and questions require a more detailed regulation by way of ordinances and so that it has to be seen as a mandate to the Minister for Transport, Innovation and Technology to issue a respective ordinance. Cost-covering fees for the procedure shall also be determined, in accordance with the Minister of Finance. These should not represent an unacceptable burden for the applicant and not lead to disadvantages in international competition. The provision concerning the determination of expenses of the security authorities is modelled on § 140 d, para. 3, of the Austrian Aviation Act. The ordinance also has to regulate who will be obliged to bear the costs of the reliability examination of the operator.

#### **As to § 13 (Supervision and competent authorities)**

##### **As to Para. 1**

According to Art. VI [Outer Space Treaty], Austria is obliged to supervise space activities of non-governmental entities continuously. This includes in any case also the verification whether all the conditions for authorisation are met before the launch. § 13 determines that this task is assigned to the

Minister for Transport, Innovation and Technology. The supervision encompasses governmental and non-governmental space activities in regard to matters covered by the present law.

**As to Para. 2:**

For the performance of their task, the supervising organs receive the competences necessary for inspection. The public interest in supervision and control prevails over the interest of the operator in the undisturbed operation in the business premises in the concrete case.

**As to Para. 3:**

For the authorisation of a space activity, it can be necessary to verify the personal reliability of the operator. This results, amongst others, from the different possibilities of the use of acquired data (e.g. remote sensing). The verification of reliability may make it necessary to request specific data, including, if need be, also the extract from a judicial record. The involvement of the security authorities is modelled on § 140 d of the Austrian Aviation Act. The security authorities have, as a result, to communicate whether there are security doubts against the verified person. A written statement of the applicant may also be requested by the use of a form (to be decided in an ordinance) which inquires relevant aspects for the given sector and will then be checked up by the security authority as regards their correctness.

**As to Para. 4:**

The provision corresponds to § 79, para. 2 of the national Civil Aviation Ordinance 2010 (Zivilluftfahrzeug- und Luftfahrtgerätverordnung/ZLLV), Federal Law Gazette II No. 143 as regards its contents, and is necessary with regard to indispensable interests of military security.

**As to § 14 (Sanctions)**

In order to ensure compliance with the present law, as well as for reasons of general and specific deterrence, penalties are provided for in case of its infringement. This also serves the exercise of Austria's duty of supervision under Art. VI, sentence 2, of the Outer Space Treaty of 1967. It [§ 14] provides for an administrative penalty that has to be determined depending on the seriousness of the infringement in the specific case. With regard to the specifically serious infringement of carrying out a space activity without authorisation, a minimum penalty is stipulated. The determination of a general upper limit and a minimum penalty for the carrying out a space activity without authorisation is modelled on the Austrian Aviation Act (§ 169). As the danger of damages caused by space objects subsists during a very long period of time and the elimination of hazards by the authority or appointed third parties is difficult and to some extent impossible, the penalties determined are comparatively high.

**As to § 15 (Transitional provision)**

The transitional provision shall clarify, from which moment in time space activities are subject to the present law. For space activities commissioned before the entry into force of the present law, the authorisation is converted into a duty of notification. The recourse provided for in § 11 does not apply in such cases. The general liability provisions of the General Civil Code (Allgemeines Bürgerliches Gesetzbuch, ABGB) apply. All of the other provisions will be applicable to projects already commissioned before the entry into force of the present law *mutatis mutandis*.

**As to § 16 (Linguistic non-discrimination)**

The terms used in relation to natural persons apply to both sexes.

**As to § 17 (Implementation)**

The clause governing implementation clarifies that the Minister for Transport, Innovation and Technology is primarily competent for the implementation of the law. With regard to certain provisions, however, the agreement with other Federal Ministries has to be reached. This especially concerns the assessment whether a planned space activity does not run counter to national security, international obligations or Austrian foreign policy interests (§ 4, para. 1, letter 3). This is necessary to involve the authorities competent for those areas and to preserve the respective responsibilities. A similar obligation exists in § 3, para. 1, letter 1 of the War Material Act (Kriegsmaterialgesetz). As regards questions with an impact on the Federal budget, an agreement has to be reached with the Minister of Finance. As regards the implementation of the provisions concerning sanctions and insurance, in addition to the Minister for Transport, Innovation and Technology and partly the Minister of Finance, also the Minister of Justice is entrusted.