

## Export controls and satellite launches: what's new?

by

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### Abstract \*

Outer space activities have always been subject to export controls on the basis of both multilateral arrangements and national legislation. Considerations of national security and foreign policy play an important role in the way these controls are being applied in practice. The launch business continues to be the specific focus of these controls because of its relation to the issue of missile (non-) proliferation. Heightened awareness of national and global security thus unavoidably produces tighter controls and ensuing uncertainties for the commercial launch industry. Some recent developments in this field will be reviewed.

### Introduction

The September 11 terrorist attack and its aftermath have brought heightened awareness of the issue of proliferation of weapons of mass destruction (WMD), including the delivery systems, and of conventional weapons. Four multilateral arrangements in force today address various related threats through the creation

of more or less harmonized national regulations which restrict the export of certain sensitive equipment and technologies. Two of these arrangements have a direct bearing on the launch business: the Missile Technology Control Regime of 1987 (MTCR) and the Wassenaar Arrangement of 1996 (Wassenaar).<sup>1</sup>

The MTCR seeks to limit the spread of delivery systems of WMD, *i.e.* missiles, missile technology and related equipment and know how, whereas the Wassenaar Arrangement focuses on trade in conventional weapons and in sensitive goods and technologies which (may) have both civilian and military applications or uses, the so-called 'dual-use' items. (Commercial) communications satellites are generally treated as dual use sensitive goods and are therefore subjected to national export controls. The U.S., for instance, treats these satellites as arms,

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<sup>1</sup> The other two arrangements are the *Nuclear Suppliers Group* of 1975 which aims at preventing nuclear trade for peaceful purposes from contributing to the development of nuclear weapons, and the *Australia Group* of 1985 which addresses chemical and biological weapons proliferation. They will not be discussed in this article.

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with correspondingly strict State Department export licensing procedures and sanctions.

These two regimes have a number of aspects in common:

- (a) they are not treaties, but voluntary, non-binding arrangements and they have no enforcement mechanisms;
- (b) the parties or members agree to restrict trade in the above goods and technologies through national export control and licensing systems;
- (c) the parties share information about denials of export licenses to their own industries to prevent that foreign clients, rejected by one party, simply buy the sensitive technology from an other party;
- (d) the 33 parties to both regimes are predominantly NATO members or NATO allies and – partly overlapping – European, mainly EU member state, countries;<sup>2</sup>
- (e) the two regimes affect trade in launch services.

To begin with the latter aspect, it may be considered common knowledge by now that the technology applied to the development, manufacturing and operation of ballistic missiles is, in essence, virtually identical to that used for making (expendable) space launch vehicles. The MTCR therefore speaks of “rocket systems”, “rocket stages” and “rocket

engines”, which encompass both of the above.

The MTCR strongly discourages the transfer of rocket equipment and technology. Technology in this connection means “specific information which is required for the development, production and use of a product”, which includes instruction and training and technical data such as blueprints, diagrams and manuals.<sup>3</sup> In other words, an Arianespace engineer is not supposed to tell/show his colleague from Korea, the latest new MTCR member, how the rocket system of the Ariane 5 launch vehicle works.

Three remarks on this example:

- (a) with the company Arianespace incorporated in France, French national export licensing regulations based on the MTCR guidelines will govern the interaction between the two engineers;
- (b) the fact that both France and Korea are members of MTCR does not entitle the two countries to freely interchange this information. A U.S. Department of State Fact Sheet on MTCR puts it as follows:

“Membership in the MTCR does not involve an entitlement to obtain technology from another partner and no obligation to supply it. Partners have explicitly affirmed this principle. Partners are expected, just as in such trade between partners and non-partners, to exercise appropriate accountability and restraint in inter-partner trade.”<sup>4</sup>

- (c) the fact that Korea promises not to use the technology for the (further) development of home-grown missiles does not, as such, necessarily constitute sufficient guarantee for the French export control authorities to approve this exchange of information. True, the MTCR

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<sup>2</sup> Present membership of MTCR: Argentina, Australia, Austria, Belgium, Brazil, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, The Republic of Korea, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Russia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom and the United States, see [www.mtcr.info](http://www.mtcr.info) (accessed 24 September 2003). All these countries, except Brazil, South Africa and Iceland, are also members of Wassenaar. Bulgaria, Roumenia and Slovakia are parties to the latter arrangement only.

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<sup>3</sup> See MTCR Equipment and Technology Annex – 11 June 1996, para 2 (Definitions)

<sup>4</sup> *Commonly asked questions on the Missile Technology Control Regime*, Fact Sheet, U.S. Department of State, Bureau of Nonproliferation, October 19, 2001, [www.state.gov/t/np/rls/fs/2001/5481ph.htm](http://www.state.gov/t/np/rls/fs/2001/5481ph.htm) (accessed 24 September 2003)

Guidelines “are not designed to impede national space programs or international cooperation in such programs..”, but the Guidelines add to that declaration “..as long as such programs *could* not contribute to delivery systems for weapons of mass destruction.”<sup>5</sup> This emphasis on ‘could’ means that France will have to make its own investigations into the capabilities and objectives of the missile and space programs of the recipient state and assess the end use of the transferred data. It also implies that, if such contribution to missile development cannot completely be ruled out, the French government will have to ask for assurances from the government of Korea that “the items [=the equipment and/or technology that will be transferred] will be used only for the [peaceful] purpose stated...[and that] neither the items nor replicas nor derivatives thereof will be re-transferred without the consent of the [French] government.”<sup>6</sup>

Obviously, with a “strong presumption to deny such transfers” as guiding principle, both the international sale of missiles, but also legitimate cooperation between countries on the development of (commercial) space launch vehicles, have been affected.

A 2002 report of the U.S. General Accounting Office (GAO) concluded that the MTCR helped reduce the number of countries with ballistic missile programs: the MTCR “contributed to ending sensitive ballistic missile programs in a number of countries including Argentina, Brazil, South Africa and Taiwan and ...may have helped slow missile development in India, Iran, Israel, North Korea, and Pakistan..”<sup>7</sup>

<sup>5</sup> *Guidelines for Sensitive Missile Relevant Transfers*, para. 1, MTCR, see

[www.mtcr.info/english/guidetext.htm](http://www.mtcr.info/english/guidetext.htm) (accessed 24 September 2003)

<sup>6</sup> *Id.*, at paras 3 and 5

<sup>7</sup> *Nonproliferation – Strategy needed to strengthen multilateral export control regimes*, U.S. GAO Report to Congressional Committees, GAO-03-43, October 2002 (hereinafter referred to as GAO Report), at p.8

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And regime members have made it more difficult, more costly and more time consuming for ‘proliferators’ to obtain the expertise and material needed to advance their programs.

At the same time the regime and the way national governments applied the MTCR principles in practice may be ‘credited’ for slowing down the development of launch vehicles in India and Brazil and for discouraging exchange of post-launch failure investigation data or other cooperative activities between launch companies of different nationalities.<sup>8</sup>

The same GAO Report identified a number of weaknesses in regime activities, such as less than disciplined reporting on national export licensing decisions, disparities in national lists of controlled items and “significant differences in how regime members implement agreed-upon controls”. The Report also identified obstacles which stand in the way of strengthening the effectiveness of the above multilateral export control regimes, such as the fact that decisions are consensus-based and can therefore be blocked by a single member and the voluntary and non-binding character of the regimes which make enforcement virtually impossible.

One could say, with an element of demagoguery, that these loopholes and weaknesses are bad news for non-proliferation efforts but good news for legitimate non-military space cooperation.

A specific problem mentioned by the Report deserves special attention because it was one of the reasons for a new multilateral non-proliferation initiative to supplement the MTCR: the growing

<sup>8</sup> On this aspect, see *The International Trade in Launch Services – The effects of U.S. laws, politics and practices on its development*, H. Peter van Fenema (1999); *Launch services and satellite export controls: recent developments in the U.S.*, by the same author, ‘Project 2001’ – Legal framework for the commercial use of outer space, Carl Heymanns Verlag, pp. 121-126 (2002).

capability of non-member countries to develop technologies used for weapons of mass destruction and trade them with other 'countries of concern' which undermines the regimes' ability to prevent proliferation. An example of this "secondary proliferation" quoted in the Report is North Korea's export of "significant ballistic missile-related equipment, components, materials, and technical expertise to countries of concern, including Iran."<sup>9</sup> And, one could add, any new customer willing to buy missile products or technology stimulates further production and sales thereof.

During its Presidency of MTCR in 1999, the Netherlands proposed to address, *inter alia*, this problem through a multilateral agreement which would be open to members and non-members of MTCR alike, thereby supplementing a Western-oriented, supply-side, sensitive trade-restricting regime addressing the 'haves' by a more global supply- and demand-side arrangement which says: 'don't sell, don't buy, don't develop and don't possess ballistic missile equipment or technology!'. As one expert explained: "this supplemental arrangement basically puts a warning on missiles and missile components, reading 'ballistic missiles are hazardous to your health!'"

The arrangement, which got strong support from the EU, and was the subject of a substantial number of meetings and consultations, in particular with non-MTCR members, was officially born on 26 November 2002 in The Hague, Netherlands, and was baptized as "*The International Code of Conduct against Ballistic Missile Proliferation*" (ICOC, or H[ague]COC).<sup>10</sup>

HCOC does not forbid ballistic missiles, but calls for greater restraint in the

development, testing, use and spread of ballistic missiles. The Code also introduces a number of confidence building measures to increase transparency and reduce mistrust between member states. The most important one of these measures is the obligation to announce missile launches in advance (which will be reverted to later).

Echoing the spirit of the MTCR, the Code (through an express commitment to the U.N. Declaration on Space Cooperation of 1996) makes a distinction between, on the one hand, – permitted – peaceful international space (launch) cooperation and, on the other hand, space (launch) cooperation which may lead to missile proliferation. And, in order to separate one from the other, transparency is crucial.<sup>11</sup>

The Subscribing States commit themselves to the following transparency measures:

- (a) with respect to ballistic missiles programmes, to make an annual declaration providing an outline of their ballistic missile policies (if possible including information on ballistic missile systems and land (test-) launch sites); and to provide annual information on the number and generic class of ballistic missiles launched during the preceding year.
- (b) With respect to expendable space launch vehicle programs "and consistent with commercial and economic confidentiality

<sup>11</sup> See respective Principles 2 f, g and h, reading as follows: - "Recognition that states should not be excluded from utilising the benefits of space for peaceful purposes, but that, in reaping such benefits and in conducting related cooperation, they must not contribute to the proliferation of Ballistic Missiles capable of delivering weapons of mass destruction; - Recognition that Space Launch Vehicle Programmes should not be used to conceal Ballistic Missile programmes; - Recognition of the necessity of appropriate transparency measures on Ballistic Missile programmes and Space Launch Vehicle programmes in order to increase confidence and to promote non-proliferation of Ballistic Missiles and Ballistic Missile technology."

<sup>9</sup> GOA Report., supra note 7, at p.3

<sup>10</sup> For text and additional info, see [www.minbuza.nl](http://www.minbuza.nl) (search 'HCOC') (accessed 24 September 2003)

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principles”, to provide basically similar information as with respect to ballistic missiles, with the addition of a recommendation to invite international observers to their land (test-) launch sites.<sup>12</sup>

The HCOC contains another interesting confidence building measure which deserves full quoting:

“With respect to their ballistic missile and space launch vehicle programmes, to exchange pre-launch notifications on their ballistic missile and space launch vehicle launches and test flights. These notifications should include such information as the generic class of the ballistic missile or space launch vehicle, the planned launch notification window, the launch area and the planned direction;”<sup>13</sup>

This provision raises a number of issues, e.g. of a national security character. For instance, it is believed that the extent of transparency this clause would entail was the reason for China’s decision not to subscribe to the Code of Conduct. There is no agreed pre-launch notification model as yet. This is a matter which will form the subject of talks to be held by the subscribing states. The U.S. government has indicated that it will base its notifications and annual declarations on the U.S. – Russian Pre-Launch Notification System under development and that it expects to multi-lateralize this system to – possibly – become the HCOC standard. The U.S. also observed that it will reserve the right to launch without notification in war-like situations (which gives a part – answer to the question of which launches are to be notified in the view of the U.S.).<sup>14</sup>

<sup>12</sup> See subparas 4 (a) (i) and (ii) of the HCOC. The difference in approach lies in the fact that the information on ballistic missile systems and land (test-) launch sites is optional “as examples of openness”, whereas the ELV programme declarations *should* contain information on both the policies and the launch sites.

<sup>13</sup> See subpara 4 (a) (iii) of the HCOC

<sup>14</sup> *Remarks at the Launching Conference for the International Code of Conduct Against Ballistic Missile Proliferation*, John R. Bolton, Under Secretary for Arms Control and International  
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This part of the Code has wider ramifications than the – already complicated - military and national security aspects which, understandably, are of primary concern to the HCOC states. In particular, attention should be paid to the effect these pre-notification measures may have on the policies and practices of states with respect to the registration of space objects. The U.N. Registration Convention of 1976 requires the State of registry (which is a launching State which has registered a space object in its own national registry) to furnish information concerning that space object to the U.N. Secretariat Register “as soon as practicable”. Although the purpose of the Convention, *i.e.* to assist in the identification of space objects primarily for the application of the Space Liability Convention, would justify availability of information on the launch of a space object *before* the launch, the predominant practice of the parties to the Convention has been to do so afterwards. (The Convention of course was not meant to be of a confidence-building nature). The HCOC may have the unintended positive side-effect that Subscribing States, which are also parties to the Registration Convention, feel inclined to henceforth give their pre-launch notifications on launches of space objects with the *dual* purpose of HCOC confidence building and ‘pre-registration’ of the object for the purpose – and in the spirit - of the Registration Convention.<sup>15</sup>

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Security, The Hague, November 25, 2002, hereinafter referred to as ‘Bolton remarks’, see [www.state.gov/t/us/rm/15488pf.htm](http://www.state.gov/t/us/rm/15488pf.htm) (accessed on 24 September 2003). *The Agreement between the [USA] and the [USSR] on notifications of launches of intercontinental ballistic missiles and submarine-launched ballistic missiles* of May 31, 1988 may serve as a starting point for this new U.S. – Russia agreement.

<sup>15</sup> On 27 March 2003, Austria, the Immediate Central Contact of the HCOC, forwarded the first Pre-Launch Notification (PLN), that of Japan (*re* a planned H-IIA launch on 28 March), to the Subscribing States. As the date coincided with the

This is not too farfetched. After all, the first of the “General Measures” which the Subscribing States resolve to implement, is to ratify, accede to or otherwise abide by the Outer Space Treaty, the Liability Convention and the Registration Convention.<sup>16</sup> Where ratifying the space treaties may be seen as proof of responsible behaviour which will increase confidence, the other confidence building measures, such as pre-notification, may also increase the effectiveness of the space treaties, such as the Registration Convention and, as a result, also the Liability Convention. (In that respect the HCOC is supplemental not only to the MTCR but also, *de facto*, to the Registration Convention).

A matter which may therefore also be the subject of debate in the UNCOPUOS Legal Subcommittee is the relationship between the question of ‘who will notify’ under HCOC and the existing issue of ‘who will register’ under the Registration Convention, particularly in cases of private launches.

All U.N. member states, except Iraq, were invited to the Launching Conference in the Hague. Some 100 immediately became Subscribing States. The present count is 106, which includes all MTCR members except Brazil.<sup>17</sup> The latter country purportedly was not sure about the added value of the HCOC and has some hesitations as to the effect the Code may have on its (cooperative) space endeavours. Absent are, apart from China, referred to earlier, also Israel, India and Pakistan. The latter three are missile producing countries which have not signed

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42<sup>nd</sup> Session of the UNCOPUOS Legal Subcommittee, the PLN was also distributed among the members of this Subcommittee (who, at the same session, had already been informed about the HCOC by the Netherlands delegation).

<sup>16</sup> HCOC para 3 (a)

<sup>17</sup> See [www.minbuza.nl](http://www.minbuza.nl) (search “HCOC”, Annex – List of Subscribing States) (accessed 3 September 2003)

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the MTCR either. India is also active and successful in the space launch field, whereas Israel works hard on its goal to have independent access to space as well.

The HCOC is not a treaty but a voluntary arrangement; it is only ‘politically binding’. Its effect on the trade in launch services is at this stage difficult to predict.

A positive point is the clear distinction which has been made between cooperation on Space Launch Vehicle programmes which is regarded as – in principle - covered by the U.N. Declaration on Space Cooperation (= ‘good’), and cooperation on Ballistic Missile programmes (= ‘bad’).<sup>18</sup>

Whether this will indeed result in more cooperation in the field of civilian/commercial launch service operations is doubtful. This is not so much a question of the HCOC provisions, but much more of the spirit in which they will be interpreted and applied in practice by the Subscribing States. The ‘post-9/11’ national security focus has created a ‘better safe than sorry’ atmosphere which does not augur well for the launch trade. And the HCOC was not created to promote civilian/commercial space launch cooperation but to fight ballistic missile proliferation.

In that connection, the (tone of the) statement of the U.S. representative at the Hague Conference is illustrative:

“...we are not concerned about the states that have chosen not to subscribe to the Code. Far better to know who is actually prepared to live under its terms, and who is not. Far better to know who is

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<sup>18</sup> See text of Principles in footnote 11. See also the “General Measures”, para 3 (d): “To exercise the necessary vigilance in the consideration of assistance to Space Launch Vehicle programmes in any other country so as to prevent contributing to delivery systems for weapons of mass destruction, considering that such programmes may be used to conceal Ballistic Missile programmes.”

truly serious about stopping the proliferation of ballistic missile technology and the risk that such technology could be used to carry weapons of mass destruction against innocent civilian populations.”<sup>19</sup>

The above aspects of the HCOC do justify monitoring the practices of the subscribing states in the coming years.

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<sup>19</sup> See Bolton remarks, *supra* note 14

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