

Euroconsult study

**The content and
impact of European
and US satnav
regulations on the
satnav industry**

Version 2

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Introduction

The present constitutes version 2 of a memo, of which version 1 already provided a summary overview of the content and impact of a few *general* European and US regulations on the satellite navigation industry, further to an identification of such main elements of the relevant regulatory environment in a paper drafted by Dr. Peter van Fenema in consultation with Euroconsult. Version 1 thus addressed in particular the issues of the Liability Convention and national space laws, the various regimes dealing with security-sensitive export controls (i.e. Wassenaar Arrangement, MTCR, ITAR's and Council Regulation (EU) 1334/2000) and institutional aspects of satellite navigation in Europe (i.e. Council Regulation (EU) No 683/2008).

Further to a discussion of version 1 over the phone on July 6, 2009, it was agreed to focus in version 2, to the extent possible, on those elements of European respectively US regulations that dealt most *specifically* with the satellite navigation industry, as opposed to the space industry or general space activities and their liabilities in general.

The paper drafted by Van Fenema, attached to an e-mail dated July 1, 2009, will continue to be used as the point of departure, and the approach of the present memo will thus be to serve as an add-on and to allow, in principle, copying and pasting of all the following text into that paper, as it is formatted already along the lines thereof. In view of the maximum of three pages allotted for the purpose, such an overview can only deal with the most fundamental and immediately important elements of content and impact referred to, and can only do so at a certain level of abstraction.

Leiden, July 2009
Frans von der Dunk

The state of European and US regulations vis-à-vis the satellite navigation industry

In the foregoing, a number of *general* regulatory regimes with potential and/or substantial impact on the satellite navigation industry have been briefly surveyed. Beyond that, the current memo now addresses the state of *specific* satellite navigation regulations within the EU and the US respectively, as pertinent to the satellite navigation industry, and what are the contents and impact thereof on that industry.

For a first, high-level analysis thereof two documents will suffice: Council Regulation (EU) No 683/2008 for Europe and the 1998 Commercial Space Act for the US, both discussed further below. These documents come closest to actually *regulating* the satellite navigation industry specifically and in a dedicated fashion. It is important to understand the absence of any more specific regulation, as this is the consequence mainly of two reasons.

Firstly, the relative novelty of satellite navigation causes all existing regulation such as that discussed before to primarily or even exclusively address the (upstream) *operators* and *owners* of the satellite navigation systems themselves, not the (downstream) satellite navigation industry, i.e. the *manufacturers* of hard- or software involved and the value-added *service providers*. Hence, their impact in any event is essentially indirectly, through the legal relationships between the upstream operators and the downstream industry.

Secondly, both Galileo (at least until FOC, envisaged for 2013) and GPS (certainly for the time being) will remain publicly owned and operated. Hence, all existing regulations that *are* (or might become) relevant in the satellite navigation context generally address governments and public international entities such as the European Commission / EU and ESA. Again, therefore, the impact upon the (private) industry largely arises through further regulation or other imposition of conditions, such as on the transfer of relevant risks.

As a consequence of the above, in terms of the impact on the satellite navigation industry, sector-specific regulations typical for comparable industries (such as on certification, licensing or safety of service provision), are generally absent in this field as of yet, both in the US and in Europe. By contrast, regulatory regimes of a much more general nature will (e.g. in the case of European competition or US anti-trust regulations) or may (e.g. in the case of telecom regulation; satellite navigation often being considered a peculiar sub-sector thereof) have an important impact on the industry as well. The sole exceptions to be discussed here concern Council Regulation (EU) No 683/2008 and the 1998 Commercial Space Act.

The institutional arrangements on satellite navigation within Europe following from Council Regulation (EU) No 683/2008

Council Regulation (EU) No 683/2008, the sole piece of satellite navigation-dedicated regulation in Europe currently in force, was enacted to ensure progress of the Galileo programme after the negotiations for a PPP had failed. Its main consequence, therefore, was to re-transfer responsibility for building the system, launching the satellites and preparing for FOC to public authorities, notably the European Commission through the GNSS Supervisory Authority with ESA in the role of coordinating technical developer.

Consequently, the Regulation further deals with such issues as ensuring the financing of the building and deployment of the Galileo satellites, the integration of the current EGNOS system into Galileo, international cooperation in the context of Galileo, the governance of security matters and the application of security regulations.

The clause coming closest to being relevant for the satellite navigation industry is Article 20, which states that “the Commission shall ensure that protection of personal data and privacy is guaranteed and that appropriate safeguards are integrated into the technical structures of the systems.”

From this clause it may be deduced that downstream services can be offered in the future with appropriate guarantees regarding the protection of personal data and privacy at least at the satellite signal level, and that manufacturers will be required to incorporate such ‘appropriate guarantees’ – whatever they may amount to in detail.

As for the post-FOC period, it remains to be seen how Galileo would evolve. Under the Regulation it is left open whether the system will continue to be owned and operated by the Commission through the GSA, or whether a renewed effort at finding a private consortium willing to operate the system on a PPP-basis will be undertaken.

If a principled involvement of private parties in the operation of the system is to arise, regulations of the upstream part of the satellite navigation environment may well be necessary, and if their services furthermore will become involved in downstream safety- or security-sensitive operations, additional regulations may become necessary to deal with those in proper fashion – but this is still a number of years off.

As long as the system will remain in public hands the further parameters for downstream usage will be exclusively determined on the public level (EU, Commission and member states), requiring further (domestic and/or EU) regulation. For example, the Commission is currently contemplating EU regulation of liability, presumably creating a two-tier system whereby the satellite system operator would carry liability up to a certain, insurable level, and public backing provides for any compensation above that level. If such a regulation materialises, obviously the operator will then be able to offer the concurrent advantages of limited liability also to its downstream clients, i.e. the satellite navigation service industry.

The impact on the satellite navigation industry in Europe in current terms is different to gauge. On the one hand, in the absence of any specific and dedicated regulation the industry is effectively impacted by a host of legal regimes not specifically drafted with satellite navigation in mind, yet in case of legal issues likely to be applied nevertheless. This applies also on the level of individual member states. Further to that, on the other hand, the Commission has only just started to develop further approaches on regulating the Galileo operator’s framework, which will fundamentally determine the parameters within which downstream satellite navigation service providers will be offered access to the signals, and in turn will be able to offer their own services to the consumer markets. Currently, therefore, the main point is a need for (at least) the European industry to closely follow such developments, and wherever necessary provide its proper input into the process in order to ensure its interests are best served by the ultimate regulations to arise.

[*The 1998 Commercial Space Act and the institutional arrangements on satellite navigation in the US*](#)

In the US context, the sole piece of regulation at the highest level addressing satellite navigation in any specific sense is the 1998 Commercial Space Act, which dedicates one Section (§ 14712) to promotion of US GPS standards. This is largely the result of the free provision of GPS open signals by governmental authorities (essentially the US Department of

Defence), under a ‘use it at your own risk’ approach whereby there is no perceived need as of yet for example to certify navigation devices or to impose safety standards on their operations or services delivered beyond the normal general business regimes.

Section 14712 only addresses the finding of the US Congress that GPS “has become an essential element in civil, scientific, and military space development because of the emergence of a United States commercial industry which provides Global Positioning System equipment and related services”, and hence encourages the US President to “(1) ensure the operation of the Global Positioning System on a continuous worldwide basis free of direct user fees; (2) enter into international agreements that promote cooperation with foreign governments and international organizations to— (A) establish the Global Positioning System and its augmentations as an acceptable international standard; and (B) eliminate any foreign barriers to applications of the Global Positioning System worldwide; and (3) provide clear direction and adequate resources to the Assistant Secretary of Commerce for Communications and Information so that on an international basis the Assistant Secretary can— (A) achieve and sustain efficient management of the electromagnetic spectrum used by the Global Positioning System; and (B) protect that spectrum from disruption and interference.”

Thus, whilst later domestic regulation of a lower level to deal with the satellite navigation industry within the US is not to be excluded (but would in any event be beyond the scope of the present summary analysis), again no reference whatsoever is made to the need for regulating certification, licensing, safety of operations or even liability issues. The latter present a clear example of the institutional situation in the US where GPS is owned and operated by the US Department of Defence in consultation with other governmental departments as well as the industry, for also without any specific liability regulation satellite navigation activities may of course result in liability implications.

The basic approach taken as a consequence of the above is that, since GPS Open Signals are provided without a contract and without a user fee, the US authorities do not except liability for any downstream damage involving the use, absence or flaws of GPS or its signals. The exceptions here are provided by a handful of US laws, such as the Federal Tort Claims Act and the Suits in Admiralty Act, which provide for the waiver of sovereign immunity if the US government is sued in US courts for a certain array of cases of governmental provision of services, even if for free and on a non-contractual basis.

The impact of this situation on the satellite navigation industry in the US, like in Europe, is that in the absence of much specific regulation even regarding the operators, let alone the downstream service providers, various general regimes may be found applicable and/or applied in case of legal issues or disputes; regimes which have neither been developed with downstream satellite navigation services in mind nor provide much guidance themselves on how to be applied in that context. The example of liability is illustrative in this regard, as handling liability issues on the part of the satellite navigation industry will essentially have to be based on general tort law, in the absence of any satellite navigation-dedicated liability regime. Here, for instance, under certain (limited) circumstances, in spite of the free and non-contractual character of GPS signals being used, possibilities may exist to claim for damage resulting from such use under general US tort law.