

Managing

Intellectual Property in Procurement – Applicable Laws and Policies for MINDEF and the Local Defence Industry

ABSTRACT

Intellectual property protection is instrumental in promoting innovation in industrialised sectors such as information technology, engineering, computing and even defence materiel. All the advances in these sectors are attributable to the sustained cultivation of scientific and technological capabilities within the legal and operative framework of a comprehensive intellectual property rights regime.

Invariably, the defence industry is not immune to all these dynamics. Intellectual property has played, and will continue to play, a pivotal role in shaping defence procurement markets worldwide. The manner in which intellectual property is managed in procurement has now become one of the main determinants of the efficacy of a nation's defence acquisition and spending.

This essay offers an insight into the applicable laws and policies which govern the management of a successful intellectual property rights regime in the specific context of defence procurement. It begins by illuminating the nature of intellectual property and the defence procurement process, before expounding on the more common branches of the law in the defence industry, namely, the law of copyright, patents and confidence. It then seeks to shed some light on the operative framework of an efficient policy for managing such intellectual property rights in defence procurement, which policy is also currently adopted by the Ministry of Defence in most of its procurement contracts.

By Kow Keng Wee

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INTRODUCTION

What is Intellectual Property?

Intellectual Property (IP) describes a wide variety of original or innovative works by authors, artists and inventors. As a generic term, it refers to all forms of creative output. IP is intangible in nature. Yet, when manifested in a tangible form for consumption by the masses, in an industrial design or artistic product for example, it is capable of generating revenue or flourishing as a marketable asset. The law recognises this, and seeks to provide mechanisms to restore the intrinsic value of IP to its creators or rightful owners through various legal devices such as assignments and licensing. This way, IP law regulates the use and ownership of inventive or creative works, thereby encouraging further intellectual endeavours in the relevant fields for the good of the industry as well as the general public.

What are IP Rights?

IP rights, then, are a bundle of legal rights conferred exclusively upon authors, artists and inventors to protect the fruits of their creative labour and investment from being infringed or misused. Generally, these rights preclude third parties and non-owners from dealing in the IP without permission. They serve to deter others from copying or taking unfair advantage of the works to which the IP relates. For example, it is only by way of an outright sale of the IP in question or a licence thereof to third parties that the same may be reproduced or adapted elsewhere for use. In terms of business dynamics, an IP's potential for such commercialisation is deemed as being most valuable. This proposition applies equally in the defence industry, where various sources of IP may result from a multitude of procurement activities, acquisition exercises as well as joint ventures for the enhancement of technologies and other defence capabilities. It therefore becomes imperative to understand the sources of these IP and IP rights in defence, as well as the nature of the defence procurement process itself, so that a sound

policy for managing the same may be devised and implemented in practice.

IP AND DEFENCE

Defence Procurement

Every government has a need to procure goods and services to sustain a variety of municipal functions and activities. When the government acquires such goods and services to meet the specific defence needs of the state, the processes involved in the acquisition are referred to as defence procurement.¹ The goods that may be needed for defence purposes include aircraft, tanks, warships, weapons, and other military equipment. On the other hand, the services required could range from the transportation and warehousing of the goods themselves, research and development (R&D), and materiel maintenance, to incidentals such as insurance, legal and technical consultancy services.

Given the complexities of modern warfare, the range of goods and services that a state might possibly need for its defence can never be truly exhaustive. That said, many states have, in the course of their procurement practice, departed from conventional off-the-shelf purchases to satisfy their defence needs. Those states are now increasingly looking towards technology transfers and collaborations to meet the operational and military requirements of their armed forces. Invariably, such trends in procurement have dramatically enhanced the sciences, technologies and other capabilities in the defence industry. These activities account for the principal sources of IP in defence procurement.

Sources of IP in Defence Procurement

In Singapore, all defence-related matters – including defence procurement – fall within the purview of its Ministry of Defence (MINDEF). In turn, most of these procurement functions are undertaken and administered by DSTA.² When MINDEF or DSTA engages in



defence procurement, much effort goes into the processes of sourcing, tendering and contracting for the required goods and services. Invariably, the resultant procurement contract would identify the sources of IP that may be engaged for or generated in the process, and document how the same are to be managed. An existing IP which has been introduced into the contract is referred to as “Background IP”, while that which has been developed as a consequence is known as “Foreground IP”.

Typically, the IP that may be derived during the course of procurement are the result of the following activities:

- a) R&D work as conceptualised by the armed services, either to be performed internally by DSTA as part of its pre-contractual activities, or those contracted out to the industry to be performed by others;
- b) Field trials and testing by MINDEF, DSTA or the armed services, for the purposes of conceiving or ascertaining operational requirements and other military capabilities to be developed or procured; and
- c) Technology Transfer Agreements (TTAs) and similar Memoranda of Understanding (MOUs) established by MINDEF or DSTA with their strategic partners for jointly developed projects and other research-based or defence-related collaborative works.

Conceivably, IP may also be embodied in the form of technical information and know-how such as those discernible from products, procedures, reports, designs, data, specifications

and other sources incidental to the procurement process. Almost all IP of interest to the defence industry are capable of protection in one form or another. The more common forms of these IP are copyright, patents and confidential information.³

Law of Copyright

Copyright serves to protect the expression of ideas represented in a tangible or material form, for example, a written document, drawing, etc. It confers upon the owner a bundle of exclusive rights to do certain acts in relation to the copyrighted work or subject matter, such as reproducing, publishing, performing or adapting the same for use elsewhere. For this reason, copyright is generally described as the right to stop copying.

In Singapore, the Copyright Act⁴ provides the legal basis for the protection of original literary, dramatic, musical and artistic works, sound recordings, films, broadcasts, cable programmes and published editions of works. In order to qualify for copyright protection, the work must be: (i) expressed in a tangible form; (ii) original; and (iii) the result of some effort and skill. Copyright protection arises automatically when the original work is created or published. There is no system of copyright registration in Singapore, and no particular formalities are required to be adhered to in seeking protection under the Copyright Act.



Conceivably, in the context of defence procurement, copyright would apply to matters such as technical reports, scientific data, engineering drawings and other specifications.

Law of Patents

Notwithstanding the foregoing, the most important form of IP protection in the defence industry for scientific and technological inventions still lies in the grant of a patent. In Singapore, the Patents Act⁵ provides the legal



An example of a Certificate of Grant of Patent issued by Singapore.

basis for the protection of such inventions. A patent gives the inventor, or the patentee, the exclusive right to control the use, sale or exploitation of his invention for a period of time. In return for this monopoly, the invention must be publicly disclosed so that others may benefit from the information given. In the context of procurement, such information is most useful to defence scientists and engineers in facilitating their research and development of complex military systems and other capabilities.

For an invention to be patentable, it must: (i) be novel; (ii) involve an inventive step (i.e. something which is not obvious to a person skilled in the relevant field); and (iii) be capable of industrial application. If these requirements as to patentability are satisfied, an application may be filed with the Intellectual Property Office of Singapore (IPOS) for the grant of a patent. Applications are made on prescribed forms comprising: (i) the specifications which describe the invention; (ii) the claims which define the matters sought to be protected; and (iii) an abstract which furnishes technical information. Once the patent has been

granted, it remains in force for a period of 20 years during which the patentee is conferred the exclusive right to exploit the invention or authorise another, for example, through licensing, to do so.

Law of Confidence

Apart from the law of patents, valuable scientific and technological information that may be derived during the various stages of the procurement process can also be protected by the law of confidence. The law is also capable of protecting trade and governmental secrets attached to or documented during the course of procurement from any unauthorised disclosure.

In contrast to the statutory protection afforded to copyright and patents⁶, the law of confidence in Singapore is not codified but based largely on the English common law. In addition, unlike copyright and patents, that law also does not provide exclusive or monopolistic rights for confidential information. Instead, a range of remedies is available to restrain any unauthorised disclosure of the same. These include injunctions against further disclosure and use, as well as damages or monetary compensation for parties aggrieved by the breach of their confidences.

The law of confidence protects only confidential information. In order for the information to be protected, it must therefore have the requisite quality of confidentiality about it. This means that the information must not be common knowledge or otherwise be in the public domain. Further, in order for an action for breach of confidence to arise, it is necessary to show that the confidential information was imparted in circumstances importing an obligation of confidence between the parties. In the defence industry, this obligation is invariably contractual in nature, and either expressly defined and protected by the terms of a "confidentiality" clause in the procurement contract, or extensively documented in an accompanying Non-Disclosure Agreement.

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MANAGING IP IN PROCUREMENT

IP Ownership and Commercialisation

Evidently, an enormous commercial value is attached to IP. Its value is derived from the exclusive rights accompanying IP ownership to reproduce and exploit it, or authorise others to do the same. In the context of procurement, such ownership rights are instrumental in developing technological and strategic advantages for national defence capabilities.

That said, it must be emphasised that ownership is not the only way in which IP rights may be secured. The commercialisation of IP can also be realised through a sale or licence to third parties. In a sale, all the exclusive rights attached to the IP are assigned to the “new” owner. However, with licensing, the proprietor of the IP retains a certain degree of ownership and control over it, and very much determines how the IP is to be used or exploited commercially. This control is manifested by the terms or scope of the licence used.

Alternatively, a joint venture may also be considered as a means of commercialising IP. This is especially so in the case of patents, where the involvement of two or more interest groups may be more suited in ensuring that the IP is effectively developed and harnessed for value.

Guiding Principles and Desired Outcomes for the Defence Industry

It is apparent that in the course of procurement, the Government needs those rights associated with IP to develop and sustain its defence capabilities. However, it would be erroneous to simply assert that whenever the Government engages in defence procurement, it needs to secure all related IP rights every time such that the use of and access to the same remain

uninhibited throughout the acquisition cycle. In practice, the Government does not require such an extensive right to IP as part of the procurement process. Further, not all IP rights are needed by the Government in the first instance. For example, some rights may only be required for the purposes of post-contractual management such as during the maintenance or upgrade of the defence system. Still, others may only be necessary for the limited purpose of conceptualising the operational requirements which set in train the procurement process in the first place. The reality is that the Government generally does need to own or even acquire the rights to IP – either Background or Foreground – in order to realise its procurement objectives. Prudence also dictates that the Government refrain from acquiring those IP rights purely as a matter of contingency, or “just in case”, as there are liabilities and risks attached to such acquisitions⁷.

Besides, it makes both economic and strategic sense for the Government to allow the Background or Foreground IP of a procurement contract to reside with the contractor, especially when the latter is in a better position to exploit or commercialise the IP for the betterment of the local industry. This not only promotes innovation and growth in the defence and other industrialised sectors, but also optimises the overall value of IP in Singapore. A sustainable industry can then contribute to the development of national defence capabilities by providing industry investment and support in R&D and other defence-related disciplines. Conceivably, such investment and support would, in the long run, reduce the overall cost to the Government of operating its procurement regime in the build-up of its defence capabilities. All these outcomes augur well for both the Government as well as the local defence industry in terms of the economy, defence and national security.



IP Policies for Defence

The disparity in defence wants and needs with regards to IP rights has inspired the development of new strategies to improve the management of IP in procurement. These strategies have since been translated into IP policies, many of which have been assimilated by enlightened nations in their defence procurement regimes.

The starting point in any discourse on the policies for managing IP in defence is to recognise the fact that the Government is often both a contributor and consumer of IP in the procurement process. This is especially true of developmental or R&D works where various sources of Background and Foreground IP are often engaged or generated in order to realise the operational needs of the armed services. Invariably, almost all of the Government's IP requirements are met by the local defence industry or an appointed overseas industrial supplier. It therefore becomes imperative in the formulation of defence IP policies that the Government adopt an industry-friendly approach which is cost-effective, practical and fully supportive of commercialisation initiatives. Such an approach encourages innovation and investment by the industry, leading to better prospects for the Government in securing enhanced IP user rights for itself, including rights to industry-initiated IP improvements. Allocating IP ownership to the industry also ensures the efficiency of the procurement process and that only the actual needs of the Government are realised or addressed. All these policies could conceivably help lower contract prices and reduce the operating costs of procurement for the Government. Conversely, if the Government had insisted on owning IP in all instances, the contractor would most likely factor the expense of non-ownership in its pricing, thereby inflating the cost of procurement. It would also discourage proactive involvement by the industry in the development of national defence capabilities. The Government should thus be mindful of acquiring only the IP rights that it needs in order to meet essential, operational requirements and procurement objectives.

It therefore follows that the framework of a sound policy for managing IP in procurement should ideally be premised on these general principles:

- a) that the Government will only acquire IP rights based on actual need, such as those which are necessary to support and develop national defence capabilities;
- b) that the local defence industry (i.e. the contractor) should own the Foreground IP under procurement contracts unless to do so would be contrary to national interests or prior commitments with strategic partners, allies or friendly nations (e.g. pursuant to TTAs or MOUs)⁸ ;
- c) that the Government will obtain appropriate rights to the IP at appropriate times for the purposes of using and supporting the defence system which has been supplied by the contractor in the course of procurement; and
- d) that the Government will be committed in supporting the local defence industry to commercialise the Foreground IP that arises from procurement contracts.

The above IP principles are generally consonant with international norms and modern procurement standards. They emphasise the need for the Government to promote the local defence industry by actively allowing the latter to exploit or commercialise the IP derived during the course of procurement. This not only encourages the industry's contribution to national defence capabilities, but also sustains the market competitiveness of the defence procurement regime. Tellingly, those IP principles have since been adopted as policies by the UK's Ministry of Defence (MoD) and Australia's Department of Defence (DoD) as part of their procurement practice.⁹

Government Guidelines for Managing IP – the Singapore Perspective¹⁰

The UK and Australian approaches to defence IP management have provided much impetus to the formulation of Singapore's IP policies for procurement. As recently as 2004, the

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Ministry of Law and the IPOS tabled a set of guidelines for managing IP in Government agencies. Several principles were devised, none of which deviated significantly from the general ones that have been enunciated above.

This was followed by a circular issued by the Ministry of Finance which documented the Government's decision that its agencies "procure or retain only IP rights that they need for operational reasons, and allow the IP to be owned by the party who is in the best position to exploit the IP in the commercial space".¹¹ That said, the same circular also lists certain situations where the Government agencies may still choose to own the IP arising from procurement, namely, "where there are national security or national interest implications in letting the contractor own the IP".¹² All these pronouncements were to apply to public procurement at all levels, be them by Ministries, Departments, Statutory Boards or Organs of State. Inevitably, they would also apply to MINDEF and its central procurement arm for the purposes of defence acquisitions, DSTA.

MINDEF's Procurement Policy on IP Management

Given the pronouncements by IPOS and the Ministries of Law and Finance, as well as the merits of having an IP policy that focuses on treating the local industry as integral to national defence capabilities, it is little wonder that MINDEF has evolved a similar framework for managing IP in procurement.

Interestingly, MINDEF's policy on IP management was first mooted in March 1996 when its then Defence Procurement Division¹³ tabled a proposition embodying more or less the general principles stated earlier. The proposition espoused the following as indicative of an informed MINDEF-wide policy on IP ownership:

- a) that, generally, MINDEF will not want to own the Foreground IP arising from procurement contracts; and
- b) that MINDEF will, however, insist on the right to: (i) use the Foreground IP; (ii) allow

a third party to use that IP for the purposes of maintenance and operation of the defence system, or training MINDEF personnel; and (iii) allow a third party to develop the IP for upgrading the defence system if the contractor is unable to do so.

The proposition was approved by the then Permanent Secretary (Defence Development), and has since been adopted as MINDEF policy.

All in all, these initiatives have brought MINDEF's policy on IP management in line with those of other developed states such as the UK and Australia, among others. Accordingly, DSTA has also revised the existing IP clauses which appear in its standard form procurement contracts to accurately reflect the prevailing MINDEF policy on IP management.¹⁴

CONCLUSION

It is clear that IP plays an important role in shaping the defence procurement market. Its importance is underscored by the manner in which implementation programmes and procurement policies within the defence industry have invariably involved an appreciation and application of IP concepts, as well as its ownership and user rights and potential for commercialisation. Drafters of procurement contracts have also been mindful of developing provisions which are consistent with the prevailing policies on managing such IP in defence. Suffice to say that the way in which IP is managed in procurement is highly reflective of the success of a nation's defence acquisition, spending and overall management.

For these reasons, MINDEF's prevailing policies on IP management are to be lauded. By integrating the local defence industry in its policies, MINDEF has sustained that industry's support for and contribution to national defence capabilities. A sustainable defence industry is instrumental to the success of any given procurement regime. By targeting only essential IP rights which are needed to meet operational requirements and procurement objectives, MINDEF has empowered and

facilitated the local defence industry in developing new capabilities as well as supporting existing ones. This is the ideal which all states should aspire to in operating their defence procurement regimes, and managing the IP that are engaged or generated therein.

ENDNOTES

1. Defence procurement is actually part of the wider notion of public procurement, which is "...the acquisition by public procuring entities of goods, construction, and services from private sector suppliers" – Campell (editor), *International Public Procurement* (Dobbs Ferry, N.Y.: Oceana Publishing) (2000).
2. DSTA is the central defence procuring entity for MINDEF. DSTA is a statutory board, so-called because it is established pursuant to a specific statute, the Defence Science & Technology Agency Act (Cap. 75A, 2001 Rev Ed). Section 7(1)(a) of the Act empowers DSTA to take the charge in defence procurement matters by "...enter[ing] into contracts for itself or the Government for defence systems, facilities, technology, equipment, materials or services or for the execution of works or any other contract...".
3. The other forms of IP include industrial designs (for the protection of designs of commercial items) and trade marks (for the protection of certain forms of branding). Admittedly, these forms of IP are less pervasive in the context of defence, and are therefore outside the ambit of this essay.
4. Cap. 63, 1999 Rev Ed.
5. Cap. 221, 2005 Rev Ed.
6. Under the Copyright Act and Patents Act respectively.
7. For example, in the case of patents, the application process is often long and complex. There are also attendant costs involved, such as the fees for engaging Patent Attorneys and the registration process itself.
8. As mentioned on page 59, TTAs and MOUs account for one of the sources of IP to be derived in the course of procurement.
9. These are variously documented in the Defence Industrial Policy for the UK, and the Commonwealth Procurement Guidelines for Australia.
10. The information under this section (as well as the section that follows) is culled mainly from the author's professional knowledge of the defence procurement process in Singapore. That knowledge – which is either unclassified or already in the public domain – is derived from his career, firstly, as a Legal Counsel in the then Defence Procurement Division of MINDEF, and subsequently, as the incumbent Head of both the Agency & Statutory Law Practice at MINDEF Legal Services as well as the Legal Department at DSTA. For reasons of policy, the author regrets that he is unable to attribute most of the contents therein to official sources within MINDEF and DSTA.
11. Finance Circular Minute No. M9/2004.
12. In the context of the circular, "national security" has been taken to mean "it will have an impact on defence, domestic security or foreign relations". The other situations mentioned in the circular include those where: (i) the IP serves to identify the Government or associate particular goods or services with the Government; (ii) the Foreground IP created is for general public dissemination and information; (iii) the Foreground IP created is used to augment an existing body of IP that the Government has developed internally or already possesses, as a prerequisite for the subsequent transfer of the augmented IP to the private sector for commercial exploitation; and (iv) the Government Agency has made significant intellectual contributions to the project development and has demonstrated plans to commercialise the Foreground IP.

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13. The Defence Procurement Division is now one of the incorporated departments of DSTA by virtue of the Defence Science & Technology Agency Act (Cap. 75A, 2001 Rev Ed.).

14. The revisions relate mainly to the “Ownership of Intellectual Property” clause.

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BIOGRAPHY



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