SPECTRUM REVIEW

SUBMISSION BY L-3 COMMUNICATIONS AUSTRALIA PTY. LTD.

20 June 2014



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Attention: Mark Knox, General Manager

EXECUTIVE SUMMARY

L3 Communications Australia Pty Ltd (L-3) makes this submission to the Department of Communications in response to the issues paper released in May 2014 (**Issues Paper**). L-3 welcomes the Spectrum Review.

The issues that L-3 has experienced provide an important case study for the Department as to why amendments are necessary to the radiocommunications regime. L-3 has been prevented from selling innovative scanning equipment in Australia that is clearly in the public interest and that is in widespread use outside Australia.

1. The Australian regime is preventing the rollout of beneficial technologies

L-3 is the manufacturer, importer and distributor of the ProVision body scanner in Australia. With over 1,000 scanners installed around the world, the ProVision scanner is the only widely deployed body scanner. ProVision is the model favoured by the United States Transport Security Authority and the European Civil Aviation Conference.

At the direction of the Commonwealth Government, a number of ProVision scanners were deployed in Australia's international airport terminals by mid-2013 to ensure that Australian travellers were afforded the highest level of security protection against aviation terrorism on international flights.

However, the deployment of ProVision scanners in Australia has been frustrated by significant bureaucratic impediments, taking over 7 years to unsuccessfully resolve to date. The intervention of the Office of Transport Security was required to enable deployment at international airport terminals.

L-3 continues to be precluded, in practice, from supplying scanners in other locations subject to security threats, including domestic airport terminals, Parliamentary buildings, embassies, corporate premises, major events, and critical infrastructure. L-3 is also precluded from supplying scanners for locations where high security is paramount, including prisons and courtrooms. This is clearly detrimental to the Australian public by depriving Australia of access to 21st century technologies that are intended to enhance security.

2. The Australian regime is excessively bureaucratic, costly and inflexible

Important aspects of the Australian regime are inconsistent with international best practice. As a consequence, Australia is applying regulation that is too inflexible and conservative in its approach, such regulation then impeding the deployment of new technologies that are in the public interest.

L-3 has experienced three specific problems with the current regime:

- First, radiofrequency licences are required in Australia even through radiofrequency emissions may be negligible and incapable of causing interference.
- Second, the Australian Communications and Media Authority (**ACMA**)'s powers to address special circumstances are too inflexible and are crafted in such a way that ACMA is reluctant to use them.
- Third, spectrum licensees hold a statutory monopoly and have no incentive to be reasonable.

By way of example:

• The actual radiofrequency emissions from a ProVision scanner are negligible and some 10,000 times less powerful than other commercial radio frequency devices such as cell phones, wireless handsets and other standard household devices. Emissions are contained within the walls of the machine. There is no practical risk of radiointerference. However, the *Radiocommunications Act 1992* (*Cth*)(**Act**) still requires that a licence be obtained, even though no material emissions occur.

- The ProVision scanner covers a wide frequency range, including frequencies subject to both spectrum licensing and apparatus licensing. L-3 has been told that its customers require authorisations from all relevant spectrum licensees, as well as obtaining apparatus licenses from ACMA. This is the case notwithstanding that the scanners do not emit material emissions outside the walls of the machine.
- Spectrum licensees hold a statutory monopoly over their particular spectrum. They have little commercial incentive to provide authorisations. The regime provides no mechanism for dispute resolution in the event that a spectrum licensee is unreasonable. As a result, compliance costs are disproportionately high and the regime is uncertain and subject to potential gaming by licensees.
- L-3 sought authorisation from ACMA to operate a ProVision scanner at L-3's maintenance workshop in Melbourne for testing and repair purposes. L-3 was informed by ACMA that this was not permitted under the Act and hence L-3 would need to relocate its maintenance workshop to an international airport. Obviously, this is highly impractical.

3. The Australian regime is leading to absurd results relative to other countries

Given the difficulties L-3 has experienced, it has not been able to supply ProVision scanners to date in Australia except in international airports. As a consequence, Australia is at risk of falling behind its peers in protecting against security threats. The Australian public is being unnecessarily exposed to risk.

As illustration of the manner in which Australia is out of step with international practice is illustrated by the excessive licensing fees paid by international airports to ACMA for the use of the ProVision scanners.

Australia charges a licence fee of \$**32,900** per annum for a high density area, compared to only GBP140 per annum in the UK. No relevant charges are payable in the US, Japan or other countries using the scanner.

The cost of a ProVision scanner is only \$200,000. The licence fees set by ACMA are \$32,900 per annum, meaning that the aggregate annual licence fees could exceed the cost of a machine itself over its life.

4. Important amendments to the Australian regime are urgently required

In light of the issues above, important amendments to the Australian regime are urgently required:

- Licences should not be required for radiofrequency emissions contained wholly within a device where the emissions are negligible outside the device.
- Licences should not be required for any device that makes radiofrequency emissions that are of such a negligible level that they are not capable of causing interference.
- Holders of radiofrequency spectrum should be subject to obligations to act reasonably when granting access to spectrum and should be subject to a dispute resolution regime.
- ACMA should have greater flexibility to exercise its powers and functions to give exemptions in the public interest or for special circumstances, including interim exemptions, conditional exemptions, and scope to amend class licences.
- ACMA should be empowered to interpret and apply the regime in a manner that promotes the public interest, hence should not be hamstrung by black letter interpretations that lead to detrimental results. Such an approach is particularly important for the setting of reasonable licensing fees.

L-3 would welcome a meeting with the Department of Communications and ACMA to discuss the content of this submission and to identify any practical solutions to overcome the issues identified in this submission.

20 June 2014

L-3 COMMUNICATIONS' DETAILED SUBMISSION TO THE REVIEW

1. The Australian spectrum regime is impeding the rollout of beneficial technologies

(a) The ProVision body scanner

L-3 is a leading United States-based global supplier of electronic systems, communications infrastructure and security systems. L-3 has a local operation in Australia. Relevantly, L-3 is the importer and distributor of the ProVision Body Scanning System ("**ProVision scanner**").

The ProVision scanner is a highly sophisticated body scanner that enables the public to be safely screened at airports **<u>without</u>** the use of potentially harmful x-ray scanning technologies. An image of the ProVision scanner is set out below.



The screening process uses safe 'millimetre wave' radiofrequencies in the 24.25 to 30GHz radiofrequency range. These radiofrequencies are blocked by denser objects, yet have the advantage of providing high quality imaging resolution. Millimetre wave radiation does **not** harm humans and does **not** involve ionising radiation such as high frequency ultraviolet and x-rays.

A ProVision scanner's safe 'millimetre wave' imaging technology works because clothing is translucent at certain wavelengths, but denser substances are not (such as the human body). In this manner, the scanner can penetrate clothing to reveal and pinpoint hidden weapons (metallic and non-metallic), standard and home-made explosives (sheet and bulk), drugs and other contraband, liquids, gels, plastics, powders, metals, ceramics, and other solids.

The wave energy is reflected from the body, or other objects on the body, and is used to construct a threedimensional image, which is displayed as a series of frames on a remote monitor for analysis. The ProVision scanner is able to automatically identify potential threats and highlight these on a mannequin (i.e., a generic 'stick figure' on screen), thus eliminating privacy concerns.



To be scanned by the device, a person steps inside the body scanner and two vertical antenna masts rotate around the person over a two-second interval. Each antenna element in turn sweeps from 24.25–30 GHz, thousands of times per second. The device measures reflections of the radio signals from the person and calculates a diagram that shows the location of prohibited items.



Electromagnetic energy levels are negligible and do not materially penetrate the walls of the machine, particularly as the radiofrequencies are blocked by denser objects such as the walls of the machine.

The ProVision scanner supports processing of 200-300 people per hour depending on protocols and replaces the need for time-consuming physical hand searches.

(b) Global deployment of the ProVision scanner

The ProVision scanner is the only widely deployed body scanner. Over 1,000 scanners have been procured and deployed worldwide in over 250 locations.

The ProVision scanner is approved by the European Civil Aviation Conference (ECAC) and the United States Transport Authority (USTA). Some articles on the global approvals and deployment can be found at the found at the following URLs:

- http://www.sds.I-3com.com/pdf/ProVisionATD-EU_Approved_Airports.pdf
- <u>http://www2.I-3sds.com/I/16582/2013-01-</u> <u>10/2vftd/16582/24871/US_China_Aviation_Coop_Program_ATD_article.pdf</u>

The ProVision scanner has been deployed in airports throughout the United States and is currently a favoured scanning technology to meet 'homeland security' requirements in the United States, without compromising public health and safety.

A video clip of the ProVision scanner in operation can be found at the following URL:

• <u>http://www.sds.I-3com.com/videos/video-ProVision-ATD.htm</u>

(c) Australian deployment of the ProVision scanner

On 9 February 2010, the Commonwealth Government announced a package of measures to strengthen Australia's aviation security. This included the deployment of body scanning devices at Australia's international airports to counter the threat of suicide attacks on passenger aircraft.

This announcement was made in response to the attempted bombing of a Northwest Airlines flight travelling from the Netherlands to the United States on 25 December 2009. This event highlighted a significant vulnerability in global aviation security screening practices, including in Australia. The deployment of body scanners was intended to enhance the capacity of international airports to detect both metallic and non-metallic items.

By doing so, Australia brought its aviation security procedures into line with those of other OECD countries in respect of international flights. The body scanners were intended to ensure that Australian international travellers were afforded the highest level of security protection against aviation terrorism.

In selecting the ProVision scanner, the Government followed the following steps:

- During August and September 2011, the Commonwealth Office of Transport Safety (OTS) conducted a 'proof of concept' trial at Melbourne and Sydney international airports to better assess the feasibility of device deployment on a long-term basis. During the trial, travellers could volunteer to be scanned as part of the airport's security procedures.
- From 13–22 March 2012, OTS conducted a demonstration of the body scanner at Parliament House in Canberra. The purpose of the demonstration was to inform members of parliament about the body scanner operation to help their consideration of the *Aviation Transport Security Amendment* (Screening) Bill 2012 (Cth).
- OTS also consulted with the Privacy Commission, Radiation Protection Authority and ACMA to ensure the ProVision scanners met Australian standards for privacy, safety and radio frequency emissions respectively. OTS subsequently arranged Government funding for international airports to purchase the ProVision scanner and 32 units were procured, all of which were installed by mid-2013.

International airport	No. of devices
Adelaide	2
Brisbane	8
Cairns	1
Darwin	2
Gold Coast	2
Melbourne	4
Perth	1
Sydney	12
Total	32

Importantly, as far as L3 is aware, no other manufacturer's body scanning equipment has been approved in Australia for this purpose as other products do not meet OTS requirements for privacy and safety.

(d) Demand for the ProVision scanner in Australia

As the overseas experience illustrates, the ProVision scanner deployment is not limited to international airports but includes any locations subject to security threats or where high security is paramount.

Examples include:

- Domestic airports, noting that the '9/11' flights in the United States were domestic flights.
- Parliamentary buildings and embassies.
- Critical infrastructure, including nuclear facilities.
- High security prisons.
- Courtrooms during key trials.

In other countries, L-3 has deployed the ProVision scanner at domestic airports, prisons, major sporting events, court houses, corporate headquarters, border crossings, nuclear power stations, major transport hubs, government buildings, and embassies.

Australia is unique in the world in practically preventing the deployment of ProVision scanners outside international airports in such other important locations.

2. The Australian spectrum regime is excessively bureaucratic, costly and inflexible

The deployment of ProVision scanners in Australia has been (and continues to be) frustrated by significant bureaucratic impediments. L-3 has been attempting to obtain approvals for the deployment of ProVision scanners since 2008 and has still been largely unsuccessful, some 7 years later.

The ultimate intervention of the OTS, for example, was required to enable deployment at international airports. Even with OTS intervention and strong Commonwealth Government support, the process for obtaining an exemption for international airports still took some 2 years.

The problems seem to arise in the Australian regime due to its overly broad application in conjunction with significant inflexibility in addressing novel technologies. ACMA appears to have little practical discretion to deviate from the black letter of the law.

The key problems that L-3 has experienced with the current regime can be summarised under three key headings:

- First, radiofrequency licences are required in Australia even through radiofrequency emissions may be negligible and incapable of causing interference.
- Second, ACMA's powers to create exemptions for unique circumstances are too inflexible and are crafted in such a way that ACMA is reluctant to use them.
- Third, spectrum licence holders hold a statutory monopoly and have no incentive to be reasonable.

Each of these points are addressed in turn below.

(a) Radiofrequency licences are required even though radiofrequency emissions may be negligible

Before introducing the ProVision product into Australia, L-3 engaged a leading Australian law firm to advise whether the product met local standards. The law firm advised that L-3 should assert that the ProVision is not a radio communication device because all radio activity was effectively contained within the scanner. As such, it should not be scrutinised for compliance with spectrum allocation.

The actual radiofrequency emissions from a ProVision scanner are negligible and thousands of times **less** powerful than other commercial radio frequency devices such as cell phones, wireless handsets and other standard household devices. The radio emissions from the ProVision scanner are 10,000 times **less** powerful than a typical mobile phone handset. To put this into perspective, only the most sensitive radio detection instruments are able to discern the extremely weak signals emitted by the ProVision from the general background 'noise' within a typical office area.

On the advice of the law firm, L-3 engaged the services of an Australian test laboratory – RFI Industriesand established that the ProVision system met Australian EMC requirements (AS/NZS CISPR 11). This generic standard relates to permissible levels of radio-frequency 'noise' emitted by Industrial, scientific and medical equipment and is commonly known as the 'C-Tick' Standard. In layman's terms, RFI Industries proved that the ProVision scanner emits no more electrical interference than a typical laptop.

In this manner, any radiofrequency emissions within the ProVision scanner are extremely weak and not at a level capable of causing interference. Moreover, those emissions are contained within the walls of the machine. Outside the machine, the levels are so weak that they are no stronger than a laptop. There is therefore no practical risk of radiointerference.

After OTS received a letter from ACMA in September 2010 indicating that the ProVision scanner must be licensed, L-3 engaged the law firm to write to ACMA to argue that the ProVision scanner did not need to be licensed. The law firm pointed out:

 Technical reports indicate that the levels of emissions are not only well within the EMC Electromagnetic Emission (EME) requirements even within the device, but the recorded value of the measurements appear to be less than one 100th of the permitted exposure level by the standard. Any emissions outside the device are therefore virtually undetectable.

- In this manner, the electromagnetic radiation is confined inside the machine and does not materially pass outside it. The device is therefore not capable of causing interference beyond the device in any manner that could be of any policy concern to ACMA or of concern under the Act.
- The electromagnetic radiation itself is not used "for the purposes of communicating information" as
 no information is carried, conveyed or communicated within the signal itself. Rather, it is a "dumb"
 signal that is reflected and then measured. ACMA itself recognises this in RALI MS 27 where it states
 at page 8 "any given transmission is a radiocommunications transmission for the purposes of the Act
 if it is used for the purpose of communicating information and it communicates that information by
 the emission of electromagnetic energy".
- While the Act includes radar as an example of a radiocommunications device, we understand this was intended to refer to "secondary" radar devices that convey information within the radar signal itself. Radar is also caught by the concept of a "measurement transmission" in section 20 of the Act given that a radar emission is used for the purposes of measuring distance. Moreover, a radar signal is not analogous to the ProVision scanner as radar signals are not intended to be contained within a radar device, but rather are emitted into the surrounding environment at energy levels that may cause interference.
- Electromagnetic radiation from the ProVision scanner is not a "measurement transmission" for the purposes of section 20 of the Act as it is not for purposes connected with making a measurement by means of the propagation or other qualities of radio emission.

Upon receiving this analysis, ACMA responded as follows:

"In your letter you note that L3 Communications Corporation believes that the definition of "radiocommunication" is not intended to apply to radiocommunications equipment in the nature of the L3 scanner. Some of the issues raised by this reasoning includes that "*the electromagnetic radiation if confined inside the machine*" and that "*the electromagnetic radiation is not used for the purposes of communicating information*". I note that subsection 6(2) of the Act provides that the reference in subsection 6(1) to communicating information includes "*communicating information between a part of a thing and: (a) another part of the same thing; or (b) the same part of that thing*".

From the information provided about the L3 scanner, I consider it communicates information about the characteristics of a person being scanned to another part of the scanner. The results of the scan are obtained by using radio emissions and because this enables a three-dimensional image to be constructed, the results constitute the communication of information by operation of the scanner. Therefore I believe that the device meets the requirements of [that] section of the Act.

The applicability of section 6 to the L3 scanner is not dependent on whether the scanner is capable or otherwise of causing interference.

Taking the above into account I consider that the L3 scanner is subject to the licensing provisions of the Act. Sections 46 and 47 of the Act respectively make it an offence to operate a radiocommunications device or possess a radiocommunications device for the purpose of operating the device unless otherwise authorised by a spectrum licence, an apparatus licence or a class licence."

L3 submits that the consequences of this interpretation of the Act mean that:

• A device that conveys radiofrequency emissions entirely within the device, and not outside the device, still requires a radiofrequency licence under the Radiocommunications Act.

• A device that makes emissions that are of such a negligible level that they are not capable of causing interference still requires a radiofrequency licence under the Radiocommunications Act.

L3 submits that neither of these scenarios raise any public policy concerns sufficient to warrant licensing under the Radiocommunications Act. The fact that both scenarios are caught by the Radiocommunications Act is a clear example of regulatory overreach, resulting in costly and unintended adverse consequences.

The Australian regime could learn from other regimes in this regard. L-3 has deployed the ProVision scanner across the globe and <u>only</u> the Australian regime to date has subjected the ProVision scanners to a special license scheme.

Other countries have determined that the ProVision scanner does not intentionally transmit radio emissions outside of the machine and that any unintentional emissions are so low they pose no interference risk to other equipment. The Australian regime appears to be too inflexible to enable ACMA to make such a determination. Moreover, the Australian regime contains no lower-limit for signal strength.

Australia could, for example, seek to follow the Japanese solution to this issue. The Japanese regime requires minimum levels of emissions to be made by a device before it becomes subject to licensing. A diagram of the Japanese licensing approach is set out below:



(b) Spectrum licensees hold a statutory monopoly and have no incentive to be reasonable

While the emissions from the ProVision scanner are negligible, those emissions do cover a wide frequency range, namely the frequency range 24.25 to 30GHz. Some of the frequency bands within this range are

subject to apparatus licensing, while others are subject to spectrum licensing. This is illustrated in the following diagram:



Where spectrum licences have been issued for particular spectrum in which a radiocommunications device will be operated, the regime requires commercial negotiations to be undertaken with the existing spectrum licensee(s) to obtain an authorisation for the operation of that radiocommunications device.

The following points are relevant to such commercial negotiations:

- Customers of L3 need to obtain an authorisation from every spectrum licensee for the geographic area in which the ProVision scanner operates. This will be a time consuming and costly process.
- Authorisation would need to be in favour of the operator of the ProVision scanner, not necessarily L3 itself. The spectrum owner may require certainty as to who the operator may be and may change its negotiating approach based on the potential customer.
- The Act does not contemplate dispute resolution or regulatory oversight if those negotiations fail or if the terms of the authorisation are unreasonable (including any requirement for payment).

In this manner, the consequences in Australia for owners of low-powered equipment that happen to make emissions across a wide range of frequencies are potentially very severe. Such owners must negotiate arrangements with a large number of spectrum licensees, each of which hold an effective statutory monopoly over their respective spectrum and none of which have any requirement to act reasonably. As a result, compliance costs are disproportionately high and the regime is uncertain and subject to potential gaming by licensees. Again, this is a clear failure of the current Australian regime.

The risk of a spectrum licence holder being commercially unreasonable is demonstrated, for example, by a public submission made by AAPT to ACMA in the context of public consultations relating to the deployment of airport body scanners. In that submission, AAPT identified that it had paid some \$66.4 million for the relevant spectrum and that it preferred a "*commercial solution which reflects the value of AAPT's interest in the AAPT Spectrum Licences*". AAPT also sought compensation from ACMA under the Constitution of Australia claiming that, by regulating a solution, ACMA was acquiring spectrum from AAPT for the use of the ProVision scanners on unjust terms.

Given this context, L-3 submits that the Act should contain a mechanism requiring licensees to act reasonably in the provision of access to their radiofrequency spectrum. The ownership of spectrum should not just confer a statutory monopoly on the spectrum owner; it should also confer a responsibility on that owner to act reasonably in its exercise of that statutory monopoly. Such an obligation could be imposed, for example, by way of standard licence conditions, possibly via an amendment to section 68 of the Act.

Any such licence condition should also provide for regulatory intervention and arbitration if the holder of a spectrum licence were to act unreasonably in denying access to spectrum. The *Telecommunications Act*

1997 (Cth), for example, contains access provisions to promote the efficient sharing of critical telecommunications infrastructure. The Radiocommunications Act should be amended to include similar provisions to promote efficient sharing of scarce radiofrequency spectrum.

(c) ACMA's powers to create exemptions for unique circumstances are too inflexible and reluctantly used

Notwithstanding the above, the Radiocommunications Act does confer a range of discretions on ACMA that provided some degree of flexibility. However, such flexibility seems to be illusory. As a practical matter, ACMA has been reluctant for a range of reasons to exercise those discretions.

- Section 7(1) exemption: Under section 7(1) of the Act, ACMA is permitted to make written determinations that particular devices are not "radiocommunications transmitters". A determination by ACMA under that section is treated as a legislative instrument. However, any such exemption is necessarily *ad hoc* to a particular piece of apparatus and does risk creating an adverse precedent for ACMA in circumstances where technology is evolving rapidly.
- **Class licence:** Under section 132 of the Act, ACMA may issue a new class licence that authorises the operation of a radiocommunications device within the scope of the class licence. Under section 134 of the Act, ACMA may vary a pre-existing class licence. ACMA could, for example, vary the *Radiocommunications (Low Interference Potential Devices) Class Licence 2000* so that it applied to ProVision scanners. As identified below, ACMA was reluctant to do so for ProVision scanners.
- Section 104(2)(b) override: Under section 105(2)(b) of the Act, ACMA may issue an apparatus licence that authorises the operation of a radiocommunications device at frequencies that are within a part of the spectrum that is designated for spectrum licensing. In order to do, ACMA would need to be "satisfied that the special circumstances of the particular case justified the issuing of the licence". This was the power that ACMA exercised for the licensing of body scanners at international airport terminals.

In relation to the second of the points above, the Australian regime does give ACMA the power to issue class licences. While a class licence currently exists for low interference potential devices, the ProVision scanner operates in radiofrequency bands that fall outside the existing scope of that class licence.

In its discussion paper in May 2012 relating to deployment of body scanners at international airports, ACMA was dismissive of the extension of a class licence to body scanners on the following basis:

"The radiocommunications licensing option generally pursued for a low interference potential device is class licensing. However, this option was not supported in this circumstance because class licensing operates on a 'no interference, no protection' basis. This would mean that if apparatus licences were authorised in the future to another party and interference occurred, DIT would have not right of redress. The government's improved aviation screening process could be compromised if the body scanner's operation was disrupted."

L-3 believes that this comment by ACMA reflected a misunderstanding that ProVision scanners could be disrupted by other devices. In fact, there is no practical risk of external interference with a ProVision device. In L-3's view, the high risk of such misunderstandings, even by a competent and well informed regulator such as ACMA, illustrates why a lower limit for signal strength should be expressly included within the Act, rather than a class licence for low powered devices left to the discretion of a regulator.

The last of the three points identified above is also important. The Australian regime does give ACMA the power to issue apparatus licences, even for those bands that are subject to spectrum licensing via section 105(2)(b) of the Act. In normal circumstances, spectrum licences and apparatus licences are mutually

exclusive. However, section 105(2)(b) enables an apparatus licence to be issued that overrides a spectrum licence.

The difficulty with the section 105(2)(b) power is that it is not an exemption power, rather it is a power to issue an apparatus licence. Accordingly, the fees and terms and conditions pertaining to the issue of apparatus licences apply. As identified above and below, the charges imposed by ACMA for the issue of an apparatus licence in high density areas are manifestly excessive relative to other countries.

L-3 submits that the powers and discretions given to ACMA to deviate from the licensing regime should be better crafted, thereby providing greater flexibility to address special circumstances while addressing some of ACMA's perceived reservations in using those powers and discretions. In the specific context of section 105(2)(b), ACMA should have the ability not just to issue an apparatus licence, but also to set a zero charge or deem equipment to be authorised under the spectrum licence at no charge.

Moreover, L-3 has experienced a situation that once ACMA had followed an extensive public consultation process to determine the scope of its use of the section 105(2)(b) power, ACMA was reluctant to revisit the process to address necessary refinements to the use of that power. L-3, for example, sought authorisation from ACMA to operate a ProVision scanner at L-3's maintenance workshop in Melbourne for testing and repair purposes. L-3 was informed by ACMA that this was not permitted under the Act and hence L-3 would need to relocate its maintenance workshop to an international airport. Obviously, this is highly impractical.

L-3 therefore also submits that the Act should provide greater flexibility to ACMA to refine instruments once they are issued.

3. The Australian regime is leading to absurd results relative to other countries

L-3 has deployed the ProVision scanner across the world and only Australia has created a special licensing scheme for body scanners. Moreover, only Australia has limited the practical deployment of ProVision scanners only to international airports. As a consequence, Australia is at risk of falling behind its peers in protecting against security threats. The public is being unnecessarily exposed to risk.

L-3 submits that this result has arisen because important aspects of the Australian regime are inconsistent with best practice in radiofrequency regulation. As a consequence, Australia is applying regulation that is too inflexible and conservative in its approach, such regulation then impeding the deployment of new technologies that are in the public interest.

As illustration of the manner in which Australia is out of step with international practice is illustrated by the licensing fees paid by international airports to ACMA for the use of the ProVision scanners. The apparatus licence fees charged by ACMA in Australia are far in excess of other jurisdictions.

Australia charges a licence fee of \$32,900 per annum for high density areas, compared to GBP140 per annum in the UK. No charges are payable in the US, Japan or other countries using the ProVision scanner. The cost of a ProVision scanner is \$200,000. The licence fees set by ACMA are \$32,900 per annum for a location, meaning that the licence fees could actually exceed the cost of the machine itself over its life.

In this manner, even if L-3 customers were successful at negotiating with spectrum licensees to use their spectrum (and obtained access to that spectrum at no charge), those L-3 customers would then need to obtain an apparatus licence from ACMA and pay annual licensing fees. The magnitude of the apparatus licensing fees has made the acquisition of ProVision scanners in Australia uneconomic in many instances.

L-3 submits that apparatus licensing fees for equipment such as the ProVision scanner should be set at levels that are comparable with other jurisdictions. Such fees should also take into account the commercial reality and circumstances of the particular equipment. Moreover, if the equipment is not making any material radiofrequency emissions, the licensing fees should be commensurately reduced.

L-3 submits that ACMA should be required to interpret and apply the regime in a manner that promotes the public interest, hence should not be hamstrung by black letter interpretations that lead to detrimental results. Such an approach is particularly important when setting reasonable licensing fees.

L-3 has summarised below the approach adopted in the US and Japan by way of comparison to Australia

(a) Comparison - approach adopted in the United States

In L-3's submission to the Federal Communications Commission (FCC), L-3 demonstrated that the chance of interference in relation to ProVision scanners was very unlikely. L-3 highlighted that the fact that ProVision scanners were installed in known, stationary indoor locations further reduced the risk of interference, especially given that the equipment sharing the same frequency band comprised microwave systems with fixed and highly directional antennas.

The FCC granted permission for Provision scanners to operate in the United States under a set of specified conditions. No licensing fees are payable. L-3 is required to maintain a list of all installed systems and to investigate and resolve any interference issues associated with our systems. To date, L-3 has over 750 scanners deployed with no reported interference issues.

The FCC proceeding can be found at the following URL:

• <u>http://fjallfoss.fcc.gov/ecfs/comment_search/paginate?pageNumber=1</u>

(b) Comparison - approach adopted in Japan

Japanese regulations simply state that "*if emitting power are below red line in this electric intensity graph, no equipment is required license to use/operate in Japan*". The radio field intensity of the ProVision scanner and is less than this stipulation, so no licenses are required.

4. Important amendments to the Australian regime are urgently required

In light of the issues above, important amendments to the Australian regime are urgently required:

- Licences should not be required for radiofrequency emissions contained wholly within a device where the emissions are negligible outside the device.
- Licences should not be required for any device that makes radiofrequency emissions that are of such a negligible level that they are not capable of causing interference.
- Holders of radiofrequency spectrum should be subject to obligations to act reasonably when granting access to spectrum and should be subject to a dispute resolution regime.
- ACMA should have greater flexibility to exercise its powers and functions to give exemptions in the public interest or for special circumstances, including interim exemptions, conditional exemptions, and scope to amend class licences.
- ACMA should be empowered to interpret and apply the regime in a manner that promotes the public interest, hence should not be hamstrung by black letter interpretations that lead to detrimental results. Such an approach is particularly important for the setting of reasonable licensing fees.

L-3 is continuing to progress the licensing of scanners in Australia in parallel with this submission. L-3 would welcome any assistance from the Government to overcome the many issues identified in this submission.

20 June 2014