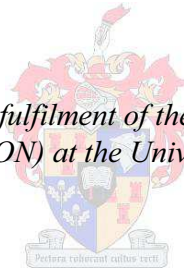


**AN ANALYSIS OF SECTIONS 11D(1)(A)
AND 11D(5)(B) OF THE INCOME TAX
ACT NO. 58 OF 1962 AS AMENDED**

by
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*Thesis presented in partial fulfilment of the requirements for the degree
MCOMM (TAXATION) at the University of Stellenbosch*



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DECEMBER 2011

meaning to a provision of a statute in Britain and South Africa today, is to determine the intention of the legislature.²³ Du Plessis states:

“Generally speaking the South African Courts seem to have accepted; almost as a slogan the basic thesis underlying the intention theory, and have applied this sloganised theory with little, if any, sensitivity to its numerous pitfalls. To list all South African precedents in which this approach has been used, recognised or referred to, would require a rather extensive table of cases. In almost every case in which the interpretation of an enactment is at stake, a *dictum* to the effect that the prime task of the Court is to endeavour to determine the true intention of the Legislature, appears.”²⁴

In his address at the NCD celebration, Ogilvie Thompson CJ, referring to the intention of the legislature said:

“When the problem with which a judge is seized turns upon the construction of some statutory provision, it is essential for him to determine the intention of the legislature as expressed in the particular statute under consideration . . . Once a judge has determined what he conceives to be the intention of the legislature he must perforce give effect to the intention so determined.”²⁵

It is therefore submitted that in the absence of any provisions defining the terms at issue, an enquiry into the true intention of the legislature must be launched before the ordinary dictionary meaning is to be attributed to the words “novel” and “non-obvious”.

2.3. Determining legislative intent

In discussing *Heydon’s case*²⁶, Lord Coke described how a court was to arrive at the real meaning of a provision in a statute:

²² Kellaway *Principles of Legal Interpretation, Statutes, Contracts & Wills* (1995) 3.37.

²³ Kellaway *Principles of Legal Interpretation, Statutes, Contracts & Wills* (1995) 3.37.

²⁴ Kellaway *Principles of Legal Interpretation, Statutes, Contracts & Wills* (1995) 3.37, in referring to the dictum of Du Plessis found in *The Interpretation of Statutes* 35.

²⁵ Kellaway *Principles of Legal Interpretation, Statutes, Contracts & Wills* (1995) 3.37, in referring to the address delivered by Ogilvie Thompson CJ at the NCD celebration as quoted in the *SALJ*1972 31.

²⁶ [1584] EWHC Exch J36, 76 ER 637, Pasch 26 Eliz.

“We are to see what was the law before the Act was passed, and what was the mischief or defect for which the law had not provided, what remedy Parliament appointed and the reason for the remedy”.²⁷

Lord Coke’s principle has been followed in South Africa and confirmed as a principle of construction in the cases of *Olley v Maasdrop*²⁸ and *Dys v Dys*.^{29 30}

Furthermore, in the *Sussex Peerage*³¹ case it was said in the House of Lords:

“If any doubt arises from the terms employed by the legislature, it has always been a safe means of collecting the intention to call in aid the ground and cause of making the Statute.”

This principle was expressly followed in South Africa in the case of *Hleka v Johannesburg City Council*.^{32 33}

Legislative intent can therefore be ascertained by having regard to the ground and cause of making the statute. The purpose of an enactment can be found in the Explanatory Memorandum issued by National Treasury on the relevant Revenue Laws Amendment Bill proposing the enactment. Regard can also be had to the relevant circumstances (i.e. political, economical etcetera) surrounding the proposed enactment to shed further light on the intent of the legislature.³⁴

Below, a study of the Explanatory Memorandum issued on the proposed enactment of section 11D will be made in order to ascertain the intention of the legislature.

²⁷ Kellaway *Principles of Legal Interpretation, Statutes, Contracts & Wills* (1995) 3.37.2, in referring to Lord Edward Coke’s discussion of the Heydon case as found in his report, 2 *Coke’s Reports* 18 Part III 7(b).

²⁸ 1948 4 SA 657 (A) 666.

²⁹ 1979 3 SA 1170 (O) 1179.

³⁰ Kellaway *Principles of Legal Interpretation, Statutes, Contracts & Wills* (1995) 3.37.2.

³¹ 8 All ER 1057 1059; (1844) 11 CI & F 14 85.

³² 1949 1 SA 842 (A) 852.

³³ Kellaway *Principles of Legal Interpretation, Statutes, Contracts & Wills* (1995) 3.37.2.1.

³⁴ Kellaway *Principles of Legal Interpretation, Statutes, Contracts & Wills* (1995) 3.36.

2.4. The intention with the enactment of section 11D

Prior to the enactment of section 11D, section 11B of the Income Tax Act dealt with deductions for R&D expenditure. It allowed for a deduction of 100 per cent for R&D expenditure undertaken by a taxpayer. In terms of capital expenditure, a depreciation allowance³⁵ existed for the cost of any qualifying asset used for the purpose of R&D.

In 2006 section 11D was introduced and effectively replaced section 11B as the R&D incentive section. The rate at which operating expenditure could be deducted was increased from 100 per cent to 150 per cent with an accelerated capital depreciation allowance³⁶ for qualifying assets used for the purpose of R&D. However, the type of expenditure qualifying for the 150 per cent allowance was restricted for purposes of section 11D. In order for expenditure to fall within this enhanced regime (i.e. section 11D), it is required that the R&D activities must be of a scientific or technological nature.³⁷ Registration expenses incurred in obtaining or renewing intellectual property will not fall within the ambit of section 11D as it did with the replaced section 11B. Furthermore, costs expended on the *discovery of novel, practical and non-obvious information* was brought into the ambit of the 150 per cent incentive allowance under the new regime. It is clear from these changes that the legislature intended to encourage the advancement of scientific and technological knowledge as opposed to routine learning associated with ongoing processes.

According to the Explanatory Memorandum³⁸ issued by National Treasury on the enactment of section 11D, the reasons for the change were:

“Innovation, research and technological development are key factors for improved productivity (leading to new or improved products, processes or services). This enhanced productivity in turn leads to increased economic growth and international

³⁵ The cost of the asset was to be claimed as a deduction over a 4 year period, i.e. 40 per cent in the first year and 20 per cent in the subsequent three years.

³⁶ The cost of the asset is to be claimed as a deduction over a 3 year period, i.e. 50 per cent in the first year, 30 per cent in the following year and 20 per cent in the last year.

³⁷ Section 11B of the Income Tax Act did not require R&D activities to be of a scientific or technological nature in order to fall within the ambit of section 11B. This is a new requirement set by section 11D of the Income Tax Act.

³⁸ National Treasury *Explanatory Memorandum on the Revenue Laws Amendment Bill, 2006*.

competitiveness. However, R&D is costly, involving high levels of technical risk. Given the high entry costs (and the indirect positive externalities for countries as whole), Governments sometimes provide extra support for local R&D via direct subsidies as well as through tax incentives (i.e. which operate as indirect subsidies). While South Africa offers a variety of direct subsidies for R&D, *the South African tax regime for R&D does not provide substantial incentives*.³⁹ South Africa accordingly needs an improved set of R&D tax incentives to ensure that local R&D is not at a global competitive disadvantage.⁴⁰

From the above it is clear that the intention of the legislature with the enactment of section 11D was to incentivise and stimulate R&D activity in South Africa. With incentive sections, the tendency is to award such a section a more liberal construction than with a restrictive section.

However, with section 11D the legislature's aim was to incentivise a very specific type of R&D activity. This can be adduced from the additional requirements set by section 11D in contrast to section 11B.⁴¹ If a taxpayer would fall into the ambit of section 11D by conducting mere routine learning activities as part of ongoing processes, the taxpayer would rather opt for such low-risk activities than attempting high-risk R&D activities requiring a great amount of skill and costs. As mentioned in the opening chapter, the ultimate goal of increased R&D activity in South Africa is the achievement of sustained growth over the long term in order to address poverty and the high levels of unemployment. However, if only low-risk routine learning activities are conducted, major advances in the field of science and technology will not follow and as a result, unemployment and poverty levels will remain unaffected.

It is therefore submitted that a more restrictive approach towards the construction of section 11D is to be followed in order to ensure that the intention of the legislature is given effect to.

³⁹ Emphasis added.

⁴⁰ National Treasury *Explanatory Memorandum on the Revenue Laws Amendment Bill, 2006 7-8*

⁴¹ A good example as illustration hereof is that section 11B listed as a qualifying R&D activity the "discovery of new information" whereas section 11D requires the information discovered to be "novel, practical and non-obvious". It is clear that section 11D is more restrictive in its approach than the replaced section 11B.

2.5. The approach to construing the terms “novel” and “non-obvious”

As mentioned above, the “discovery of novel, practical and non-obvious information of a scientific or technical nature” is one of the qualifying R&D activities for purposes of section 11D. The construction of the words “novel” and “non-obvious” forms the object of chapters 3 to 5.

In general, when construing the words used in a statute, one should have regard to the provision as a whole.⁴² It is submitted that in construing the meaning of the words “novel” and “non-obvious” information, regard should be had to the other four qualifying R&D activities in order to shed some light on the nature of the R&D Activity being studied.

In terms of section 11D(1) of the Income Tax Act, the following activities constitute qualifying R&D activities:

- (a) the *discovery* of novel, practical and non obvious information; or
- (b) the devising, developing or creation of any-
 - o *invention* as defined in section 2 of the Patents Act No 57 of 1978
 - o *design* as defined in section 1 of the Designs Act No 195 of 1993 that qualifies for registration under section 14 of the said Act;
 - o *computer program* as defined in section 1 of the Copyright Act No 98 of 1978; or
 - o *knowledge* essential to the use of such invention, design or computer program,

provided that the above is of a scientific or technological nature.

It is submitted by attorneys Sibanda & Zantwijk (consultants to Treasury on this section) that one of the motivations for the insertion of section 11D(1)(a)⁴³ is the fact that section 25(2)(a) of our Patents Act denies “discoveries” the status of an

⁴² Kellaway *Principles of Legal Interpretation, Statutes, Contracts & Wills* (1995) 3.36.

⁴³ i.e. the discovery of novel, practical and non-obvious information.

invention. A discovery, therefore, does not enjoy the benefit of patent protection and will, as a result, not fall within the ambit of section 11D(1)(b) which allows a tax incentive for the devising, developing or creation of a patentable invention. Thus, without section 11D(1)(a) the discovery of information will not enjoy any tax incentive. It is clear, from the insertion of section 11D(1)(a) that Treasury wanted to incentivise “discoveries” in addition to “patentable inventions”.

By referring to “an invention as defined in section 2 of the Patents Act”, the legislature effectively adopts the criteria for a patentable invention (set by the Patents Act) as criteria for purposes of section 11D. The Patents Act requires an invention to be *new, practical* and involve an *inventive step*⁴⁴ in order to qualify for patent protection. This presents the same criteria as is set by section 11D(1)(a) for the discovery of information.

Whereas inventions are governed by the Patents Act, discoveries are not regulated, as they are specifically excluded from the ambit of the Patents Act. However, the legislature effectively ignored this exclusion made by the Patents Act by inserting section 11D(1)(a) into the Income Tax Act. As mentioned above, section 11D(1)(a) lists the same requirements (i.e. novel, practical, non-obvious) for the information discovered as those set by the Patents Act for a patentable invention.

For this reason, it is submitted that the words “novel” and “non-obvious” should be given the meaning attributed to them in terms of the Patents Act and relevant IP jurisprudence. The *stare decisis* principle serves as authority for this view. It determines that a decision of a court is authoritative and binding on the court that gave that decision as well as all courts subordinate to that court and must be followed in subsequent cases in which the facts are similar. The scope and meaning placed on the concepts of “new”, “novel” and “non-obvious” by the Supreme Court of Appeal is thus binding on that court as well as any other court subordinate to that court (this includes the Tax Court and High Court).

⁴⁴ It will be seen in Chapter 4 that an invention is deemed to involve an inventive step if it is not obvious to a person skilled in the art. Therefore, the requirement of an inventive step is the same as the requirement that information must be non-obvious in nature.

2.6. Conclusion

It is trite law that in construing any provision of a statute, the intention of the legislature should be sought and given effect to before the ordinary meaning is awarded thereto.

From the Explanatory Memorandum issued on the proposed enactment of Section 11D it is apparent that the intention of the legislature was to stimulate R&D activities of a scientific and technological nature which will result in *new* knowledge and not merely represent routine learning activities as part of ongoing processes. The ultimate goal sought by Treasury is to create long-term growth opportunities in order to address poverty and high levels of unemployment in South Africa. It is therefore submitted that a more restricted approach be followed in the construction of the R&D activity being studied, i.e. the discovery of novel, practical and non-obvious information.

It is submitted by attorneys Sibanda & Zantwijk (consultants to Treasury on this section) that one of the motivations for the insertion of section 11D(1)(a)⁴⁵ was the fact that section 25(2)(a) of our Patents Act denies “discoveries” the status of an invention. The legislature effectively ignored this exclusion with the insertion of section 11D(1)(a). It is submitted that the intention of the legislature was to award discoveries the opportunity to qualify for the R&D tax incentive allowance.

Discoveries are not regularised and seeing as the requirements set for discoveries by the R&D tax incentive section reflects the patent requirements set for inventions by the Patents Act, it is submitted that the words “novel” and “non-obvious” should be given the meaning awarded to it in terms of the Patents Act and relevant IP jurisprudence. The relevant IP rulings will be binding on the tax court in terms of the *stare decisis* rule.⁴⁶

In Chapters 3 and 4 the meaning of the words “novel” and “non-obvious” respectively will be studied against the background of the Patents Act and relevant IP

⁴⁵ i.e. the discovery of novel, practical and non-obvious information.

⁴⁶ The *stare decisis* rule determines that a decision of a court is authoritative and binding on the court that gave that decision as well as all courts subordinate to that court and must be followed in subsequent cases in which the facts are similar.

jurisprudence. In Chapter 5, the difference between an 'invention' and a 'discovery'⁴⁷ will be studied as well as the effect that any difference has on the construction of the words "novel" and "non-obvious" for tax purposes. Furthermore, the *ordinary meaning* of "novel" and "non-obvious" will be compared with the meaning awarded to it in terms of the Patents Act and relevant IP jurisprudence. Chapter 5 will conclude by placing a final construction on the words "novel" and "non-obvious" for purposes of the R&D tax incentive section.

As mentioned above, the intention of the legislature with the enactment of section 11D was to incentivise a specific type of R&D activity. Chapter 5 will attempt to give effect to this intention by following a restrictive approach to construction.

⁴⁷ The terms "novel" and "non-obvious" were construed by IP jurisprudence as applied to 'inventions'. However, the R&D incentive section refers to the 'discovery' of new and non-obvious information. An invention results in the creation of something new, whereas a discovery presupposes an existing asset. Thus, the "novelty" requirement as applied to inventions may be more stringent in nature than the "new" requirement as applied to the discovery of information for purposes of the R&D tax incentive. Chapter 5 will study the effect of this difference in detail.

CHAPTER 3

“Novelty” in terms of IP jurisprudence

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3.1. The Law of Patents and the “novelty” requirement

In order for a taxpayer to fall within the ambit of section 11D(1)(a) of the Income Tax Act, the taxpayer must have expended costs on the discovery of *novel*, practical and non-obvious information. As mentioned above, the Income Tax Act does not contain a definition to convey the meaning of so-called *novel* information. The Income Tax Act however contains several references to the Patents Act. This reference to the Patents Act warrants an investigation into the said act in order to find a possible construction to be placed on “novel” information.

Novelty lies at the heart of IP Law. This is due to the requirement that an invention must be *new*⁴⁸ in order to qualify for patentability. The Patents Act continues to define a “new invention” by stating that an invention will be regarded as new if it does not form part of the *state of the art* immediately before the priority date of that invention.⁴⁹ The said Act therefore provides clarity on the meaning of a “new” invention by containing a statutory definition of the concept.

The question however arises whether this definition and the corresponding jurisprudence thereon can be consulted as aid in the present inquiry. The Patents Act refers to the word “new” whereas section 11D(1)(a) of the Income Tax Act refers to the word “novel”.

However, the Afrikaans text of the Income Tax Act uses the word “nuwe”. According to the *Pharos Bilingual School Dictionary*⁵⁰ the word “nuwe” means “new” in English, which is also the word referred to by the Patents Act. Furthermore, the word “novel” originates from the Latin word “*novus*” which means “new”.⁵¹ It is submitted that the above provides enough proof that the meaning of the word “new” as defined by the Patents Act, can bear the same meaning to the word “novel” as used by the Income Tax Act. This view is further supported by the absence of a statutory definition for “novel” in the Income Tax Act and the subsequent references to the Patents Act in the relevant section.

⁴⁸ Section 25(1) of the Patents Act.

⁴⁹ Section 25(5) of the Patents Act.

⁵⁰ *Pharos Bilingual School Dictionary* (2007) 169.

⁵¹ *Oxford Dictionary of English*, 2010:1215.

3.2. Statutory definition of “new” in terms of the Patents Act

The Patents Act deems an invention to be “new” if it does not form part of the *state of the art* immediately before the priority date.⁵² The *state of the art* comprises all matter (whether a product, process, information about either, or anything else) which has been made available to the public (whether in the Republic or elsewhere) by written or oral description, by use or in any other way.⁵³ The priority date of an invention is generally the date on which the patent application was lodged with the registrar.⁵⁴

From the above it is clear that South Africa enforces an absolute novelty requirement for IP purposes. There is no limitation regarding the locality of the prior disclosure, nor is there any limitation as to its form or age.⁵⁵ Certain features of this definition of “new” will be scrutinized below in an attempt to elucidate the ambit thereof. South African IP jurisprudence on the matter will be called upon. Seeing as the definition of “patentable inventions”⁵⁶ is in keeping with modern trends in international development of patent law⁵⁷ as expressed, for instance, in the European Patent Convention 1973, as well as the patent legislation of countries belonging to that convention,⁵⁸ reference will also be made to the *Guidelines for Examination in the European Patent Office* (“EPO”) as published by that office⁵⁹ as part of the above mentioned study.

⁵² See section 25(5) of the Patents Act.

⁵³ See section 25(6) of the Patents Act.

⁵⁴ In lieu of the fact that the present inquiry relates to the discovery of novel information for purposes of the R&D tax incentive deduction, the priority date of an invention for IP purposes does not bear significant relevance to this study. Therefore, a detailed investigation into the priority date of an invention will not be launched. For purposes of this study, the priority date will be the date on which the discovery of novel information for R&D purposes was made. The relevant criteria to be discussed as part of this chapter are to be considered by the taxpayer on this date (i.e. date the discovery was made).

⁵⁵ Steyn *The Law of South Africa* (2010).

⁵⁶ See section 25 of the Patents Act.

⁵⁷ Steyn *Annual Survey* (1978) 479 as cited in Steyn *The Law of South Africa* (2010).

⁵⁸ Steyn *The Law of South Africa* (2010).

⁵⁹ Hereinafter referred to as the EPO Guidelines.

3.3. “New” as laid out by IP jurisprudence and EPO Guidelines

As mentioned above, an invention is deemed to be new if it did not form part of any matter made available to the public in any form prior to the invention thereof. Jurisprudence on the matter revolves around two considerations, namely:

- When is matter considered to be made available to the public?
- When is a prior publication considered to have “described” the invention in suit?

In considering the above mentioned features of the definition of “new”, our courts have laid down certain principles as guidelines for considering novelty. These principles will enjoy closer scrutiny below.

3.3.1. Made available to the public

3.3.1.1. EPO Guidelines

According to the European Patent Office’s Guidelines for Examination⁶⁰ a *written* description should be regarded as “made available to the public” if, at the relevant date, it was possible for members of the public to gain knowledge of the content of the document and there was no bar of confidentiality restricting the use or dissemination of such knowledge. Thus, material that is kept secret, whether voluntarily or by reason of some imposed restraint, does not form part of the *state of the art*. If, however, an invention is used secretly and on a commercial scale within the Republic, the Patents Act deems such an invention to form part of the *state of the art*.

As mentioned above, no limitation is placed on the form of the prior disclosure. The EPO Guidelines elucidate the fact that non-traditional publications also constitute prior art. Such publications are usually found on the internet, via, for example, Usenet discussion groups, blogs, e-mail archives of mailing lists or wiki pages.⁶¹ It is

⁶⁰ European Patent Office *Guidelines for Examination in the European Patent Office* (2010) Part C, Chapter IV-17, paragraph 6.1.

⁶¹ European Patent Office *Guidelines for Examination in the European Patent Office* (2010) Part C, Chapter IV-21, paragraph 6.2.3.3.

submitted that the credibility of such publications is irrelevant in considering whether these publications form part of the *state of the art*.

3.3.1.2. *IP Jurisprudence*

Jurisprudence on the matter is limited. This can be ascribed to the fact that the provision is unambiguous and wide in its ambit. However, the court was faced with an interesting set of facts in *Veasy v Denver Rock Drill and Machinery Co Ltd*.⁶² At the time, the drilling machines used by miners of the Rand Mine released microscopic particles of dust into the air which resulted in the miners attracting miners' phthisis. Experiments were undertaken to produce a drilling machine which could be operated by the miners without any exposure to the dust particles. The case revolved around the question whether a device which was experimented with, put into use and then later discontinued, formed part of the *state of the art* at that time. J.A. Wessels held:

"We must distinguish between the case where an inventor experiments with a machine or device and keeps his knowledge to himself, - and the case where a person openly uses a machine or device which is identical with a later patented machine, or device and which effects the same purpose as a later patent but for any reason the use of the machine or device is discontinued. In the latter case the machine or device goes beyond the experimental stage and becomes a completed contrivance. It is then the completed contrivance which is abandoned and not the experiment. Flynn, Edmondson and Mynhardt had no object in keeping the device secret. Flynn was not experimenting with a view to taking out a patent. He wanted a device to release the air, quite openly, so that any mechanic who made or examined the machines had the opportunity of adopting the device. No evidence is needed to prove that the device was actually seen by the mine mechanics, though it is clear that both Edmondson and Mynhart knew about it."⁶³

The machines put into use did achieve the result sought after, i.e. to eliminate the release of dust particles. The machines were however considered unsatisfactory because they atomized the water and so produced a fog. The miners were prepared to run the risk of miners' phthisis rather than cope with excessive water. On this ground the machines were discontinued. The appellant argued that due to the fact that the machines were discontinued, it should be viewed as a failed experiment and

⁶² 1930 AD 243.

⁶³ *Veasy v Denver Rock Drill & Machinery Co Ltd* 1930 AD 243 at page 263.

therefore did not form part of the *state of the art*. The court however disagreed and laid down the following principle in this regard:

“...an experiment which never becomes completed but up to the last remains an experiment and nothing more does not as a rule anticipate a novel machine, device or process. When, however, the experimental stage is over, and the machine or device operates effectively for the purpose for which it was designed, and it is used by persons capable of understanding its use, then we are no longer dealing with an experiment but with a completed invention and with a completed publication. It is quite true that if the person who makes the experiment throws the machine aside and discontinues his work upon it, the presumption is that he found it useless to effect the object for which it was designed; but this is only a presumption. If he did effect the object for which it was designed and it is shown that for other reasons work with it was discontinued, it is a good anticipation, however long ago it may have been used. It is not necessary for one who pleads anticipation to prove that the machine or device which negatives novelty of the patent was in continuous use.”⁶⁴

It is therefore submitted that if the object for which an experiment was conducted, is achieved, the experiment forms part of the *state of the art* irrespective of whether the results of the experiment were put into use, provided that the public have access to these results.

3.3.2. Written or oral description

3.3.2.1. IP Jurisprudence

According to Trollip J.A. in *Gentiruco AG v Firestone SA (Pty) Ltd*⁶⁵ the question whether a claim has novelty over what is disclosed in an earlier document is primarily one of construction of the two documents.⁶⁶ The two documents are to be compared to ascertain whether the prior patent was granted for, or the prior printed publication “describes”, the same process, etc, as claimed.⁶⁷ Trollip J.A. then continues to place the following construction on “describe”:

⁶⁴ *Veasy v Denver Rock Drill & Machinery Co Ltd* 1930 AD 243 at page 263.

⁶⁵ [1972] 1 All SA 201 (A).

⁶⁶ *Gentiruco AG v Firestone SA (Pty) Ltd* [1972] 1 All SA 201 (A) at page 252.

⁶⁷ *Gentiruco AG v Firestone SA (Pty) Ltd* [1972] 1 All SA 201 (A) 252.

“Hence for it to “describe” the invented process etc., it must set forth or recite at least its essential integers in such a way that the same or substantially the same process is identifiable or perceptible and hence made known, or the same or substantially the same thing can be made, from that description. “Substantially the same”, means practically the same, or, to use Lord Westbury’s phrase adopted by Wessels, J.A., in Veasy’s case, p.269, the same “for the purposes of practical utility”; i.e., substance and not form must be regarded.”⁶⁸

If found, on comparison of the two documents, that the prior publication fails to recite a single integer, the prior publication cannot be said to describe the invention claimed. This will typically be the case if the same thing cannot be made from the description in the prior publication. Trollip, J.A. held:

“...if the description in the prior publication differs, even in a small respect, provided it is a real difference, such as the non-recital of a single essential integer, the objection of anticipation fails.”⁶⁹

In the *Gentiruco* case the court considered whether a difference in purpose between the process of the prior art and that of the patent in suit constituted a real difference. The process of the patent in suit included an instruction to include a large quantity of Naftolen in order to maintain or improve the quality of the compound. The prior publication claimed to be anticipatory also included the use of Naftolen but for the purpose of improved process ability of the compound. The purpose of the prior publication therefore differed appreciably from that of the claim. The appellant argued that the difference in purpose between two processes was irrelevant. Trollip, J.A. however found that the difference in purpose emphasized an essential difference between the processes. In referring to the argument of the appellant, he made the following comment:

“That argument is, I think, probably correct where two processes are otherwise the same or substantially the same, since such processes could conceivably serve different purposes. But usually processes devised for different purposes are themselves different in one or more essential integers, and difference in purpose might well be a good

⁶⁸ *Gentiruco AG v Firestone SA (Pty) Ltd* [1972] 1 All SA 201 (A) at page 252.

⁶⁹ *Gentiruco AG v Firestone SA (Pty) Ltd* [1972] 1 All SA 201 (A) at page 252.

indication that the processes do differ or that, if the difference is small, it is real or crucial.”⁷⁰

As regards to the manner in which the prior publication is to be read and construed, the appellate division held:

“...it is the function of the Court, applying in general the ordinary canons of construction, to determine what the document says, viz. the instructions to the ordinary skilled workman. But I am, in any event, not persuaded that the hypothetical workman himself would read the document differently. At the very least average ability to read and understand simple language relating to his trade must be postulated, and it may fairly be assumed that the workman, in order to qualify himself to make the articles mentioned in the publication, would scrutinize the document carefully through the lens of his desire and practical need to extract every bit of information. He would certainly not skip any passage; he would read through the whole document to gain that information, repeatedly if necessary.”

Furthermore, the prior publication is to be construed as at the date of its publication to the exclusion of information subsequently discovered.⁷¹ Regard is however to be had to what constituted common knowledge as at the date of publication.

In order to constitute anticipation, the prior publication must be contained in a single publication, unless such a publication comprises several parts which are separately published provided that they are so interrelated or integrated that they in fact form one single publication which is to be read as a whole.⁷² The so-called “mosaic” or “patchwork approach” is not sanctioned by our courts. Holmes, J.A., puts it as follows in *Letraset Ltd v Helios Ltd*⁷³

“One should not be required assiduously to glean ideas here and there in the prior publication, and then with the aid of hindsight piece them together into a mosaic said to describe the invention under challenge. ...Now the respondent pieces together these disparate ideas mosaically, and lo, it claims to have found therein description of the invention under challenge. This patchwork approach is not sanctioned by any decision which I have been able to find...”

⁷⁰ *Gentiruco AG v Firestone SA (Pty) Ltd* [1972] 1 All SA 201 (A) at page 258.

⁷¹ *Gentiruco AG v Firestone SA (Pty) Ltd* [1972] 1 All SA 201 (A) at page 252.

⁷² Steyn *The Law of South Africa* (2010).

⁷³ [1972] 3 All SA 191 (A).

3.4. Conclusion

From the above, it is concluded that an invention is regarded as novel if it did not form part of the *state of the art* immediately before the date of its invention. The *state of the art* comprises all matter which has been made available to the public by written or oral description, by use or in any other way.

Prior art is regarded as being available to the public if it is possible for members of the public to gain knowledge of the content of the prior art and there was no bar of confidentiality restricting the use or dissemination of such knowledge. Only experiments of which the object for which it was conducted, were achieved, form part of the *state of the art* irrespective of whether the results of the experiment were put in to use or not.

Prior art will describe the invention under challenge if it sets forth in words or recites the essential integers of the information in such a way that the same or substantially the same invention is identifiable or perceptible and hence made known, or the same or substantially the same thing can be made, from that description. "Substantially the same" means practically the same, or the same for the purposes of practical utility. If the prior publication fails to recite a single integer, the prior publication cannot be said to describe the invention claimed to be novel.

The prior publication is to be contained in a single publication⁷⁴ and should be construed on the date of its publication to the exclusion of information subsequently discovered. One should not be required to search for scattered ideas in the prior art, and then with the aid of hindsight piece them together into a mosaic said to describe the invention under challenge. Such a "mosaic" approach is not sanctioned by our courts.

If, on comparison, it is found that the prior art describes the invention under challenge, the invention cannot be said to be "new" for purposes of patentability.

⁷⁴ A publication comprising several parts which are separately published will also be regarded as a single publication provided that they are so interrelated or integrated that they in fact form one single publication which is to be read as a whole.

However, if the comparison shows that there is a real difference between the prior art and the invention under challenge, the invention will have passed the first requirement for patentability, i.e. the novelty requirement.

The second requirement set for both patentability and the R&D incentive allowance is that the invention/information must be non-obvious. An invention can be obvious despite the fact that it is considered to be new. In the next chapter the “non-obvious” requirement will enjoy closer scrutiny.

CHAPTER 4

“Non-obvious” in terms of IP jurisprudence

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4.1. Introduction

In addition to being “new”, the Patents Act also requires an invention to involve an inventive step in order to qualify for patent protection.⁷⁵ The Patents Act deems an invention to involve an inventive step if it is *not obvious* to a person skilled in the art, having regard to any matter which forms, immediately before the priority date of the invention, part of the state of the art.⁷⁶ The concepts of “novelty” and “inventiveness” are distinctly different requirements in terms of IP law. However, the line dividing the two concepts has often become obscured in the past and as a result has eluded many a judge and IP scholar. Wessels, J.A. made it clear that such a distinction is of vital importance and should be enforced by our courts:

“But it has sometimes been said that the distinction between the two is at times obscure and cannot always be maintained. For example Fletcher-Mouton has the following in his work on *Patent Law and Practice* (page 21):-

“It will readily be seen that the distinction is often one without any real difference. In nearly every case the exact thing patented has never been proposed before, and the dispute is usually as to the extent of the advance made on previous knowledge. In such case the question, is the alleged invention new, might be said to be solved by the Court determining what advance on previous knowledge would be necessary in that case to constitute an invention and then deciding if such advance had in fact been made, while the question of subject-matter would be decided by first determining what advance had been made and then considering whether such advance were sufficient to constitute invention.”

...With great respect to these learned authors, I think that the distinction is both valuable and clear and should not be obscured.”⁷⁷

The sentiment of Wessels, J.A. was shared by Trollip, J.A. in the *Gentiruco* case:

“The objections of lack of inventiveness and novelty are closely linked. Indeed, up to some stage in the past they were often considered together and the distinction between them was seldom clearly drawn. How closely linked they are is apparent from the fact that even now a test more appropriate for determining inventiveness is sometimes

⁷⁵ Section 25(1).

⁷⁶ Section 25(10).

⁷⁷ *Veasy v Denver Rock Drill and Machinery Co Ltd* 1930 AD 243 at page 281.

adopted in deciding novelty. *But an invention might be obvious without being old, or old without being obvious,*⁷⁸ and with respect I agree with the *dictum* of STRATFORD, J.A. (as he then was) ... that the distinction between the two objections is 'both valuable and clear and should not be obscured'.⁷⁹

The aim of this chapter is to elucidate the line which separates the novelty requirement from the inventiveness requirement by analysing the meaning of "non-obviousness" as laid out by our courts and comparing it to the novelty requirement.

4.2. Non-obvious requirement

As mentioned above the Patents Act requires an invention to involve an inventive step in order to qualify for patent protection.⁸⁰ The said Act further deems an invention to involve an inventive step if it is *not obvious* to a person skilled in the art.⁸¹

The same theme of "obviousness" is reiterated in section 11D(1) of the Income Tax Act where information is required to be, amongst others, non-obvious in order for the taxpayer to qualify for the R&D incentive allowance.

Seeing as the Income Tax Act contains no definition on what constitutes "non-obvious" information, the meaning and scope of the requirement will be sought in IP jurisprudence.

Below, the manner in which our courts determine obviousness, will be studied and discussed in full against the backdrop of the corresponding R&D tax incentive allowance requirement.

4.3. Determination of obviousness

The determination of obviousness has been reformulated by the Supreme Court of Appeal in a series of decisions beginning with *Ensign Brickford (SA) (Pty) Ltd v AECI Explosives & Chemicals Ltd*⁸². Plewman JA overturned and revised many

⁷⁸ Emphasis added.

⁷⁹ *Gentiruco AG v Firestone SA (Pty) Ltd* [1972] 1 All SA 201 (A) at page 251.

⁸⁰ Section 25(1).

⁸¹ Section 25(10).

⁸² [1998] 4 All SA 453 (A).

established principles relating to the law of 'obviousness' and particularly to the way in which this is tested in South African law.⁸³ It was the first documented case in which a court found a patented invention to be 'obvious' under the current Patents Act.⁸⁴ It has been notoriously difficult to revoke a patent on this ground in the past.⁸⁵ The way in which the Supreme Court of Appeal did so in this case sets new precedents. Therefore the judgement in this case warrants closer scrutiny.

4.3.1. The four-step inquiry (*Ensign Brickford*)

The long established three-step inquiry which was utilised by our courts in order to determine whether an invention was obvious was cast aside by Plewman, J.A. in the *Ensign Brickford* case. Plewman, J.A. held that the said inquiry must proceed further and that a more structured inquiry must be undertaken. He accordingly introduced into our law the following four-step inquiry:

- (1) What is the inventive step said to be involved in the patent in suit?
- (2) What was, at the priority date, the *state of the art* relevant to the step?
- (3) In what respect does the step go beyond, or differ from, the *state of the art*?
- (4) Having regard to such development or difference, would the taking of the step be obvious to the skilled man?⁸⁶

In reviewing the effect of the judgement in the *Ensign Brickford* case, patent attorney, Piers Blewett had the following comments:

"Rather than reviewing the relevant prior art as a first step in order to establish whether the invention claimed has a 'step forward' which could be said to be 'inventive' (or 'non-obvious'), a patentee is now required to pin his colours to the mast up front and lead evidence relevant to the (new) first question, and identify the inventive step said to be involved in the patent in suit. The prior art is then reviewed subsequently to see whether that alleged 'step' can be identified in the prior art, or is different. In this way, Plewman JA appears to have turned the inquiry around.

⁸³ Blewett *Patent "Obviousness" and Related Matters* (1998).

⁸⁴ Blewett *Patent "Obviousness" and Related Matters* (1998).

⁸⁵ Blewett *Patent "Obviousness" and Related Matters* (1998).

⁸⁶ *Ensign Brickford (SA) (Pty) Ltd and others v AECL Explosives and Chemicals Ltd* [1998] 4 All SA 453 (A) at page 461.

The consequences of applying this new test were certainly felt by the patentee because it was in relation to the first (new) inquiry that the Judge of Appeal felt that the patentee's evidence was lacking. The Judge called this evidence 'primary' evidence and at 811 stated that:

'...very limited attention seems to have been paid to it in the evidence. The result is that the primary evidence is not particularly helpful'.

But is this apparent lack of evidence filed on behalf of the patentee to show 'inventiveness' a valid criticism when it has traditionally been incumbent on the defendant to lead evidence in support of 'obviousness'? It has long been an established principle of our South African patent law that a patent is presumed valid until shown otherwise. The onus is on the defendant who argues invalidity of the patent to show such invalidity on any of the grounds it chooses to attempt to revoke the patent. By focussing on what the patentee has to say, and by asking the patentee to lead evidence relevant to (the new) question one, it could perhaps be argued that some shifting of the onus has occurred. At the very least, the burden of evidence on the patentee to rebut a *prima facie* case of obviousness appears to have increased."

It is submitted by Mr Blewett that the *Ensign Brickford* case led to a shifting of the burden of proof onto the shoulders of the patentee or at least has led to an increased burden of proof in this instance.

In terms of section 82 of the Income Tax Act the burden of proof that any amount is subject to any deduction shall be upon the person claiming such deduction. Therefore, if a taxpayer claims an amount expended on the discovery of novel, non-obvious and practical information the onus shall be on the taxpayer to show that the information discovered satisfies the criteria set out by section 11D(1). The onus is therefore on the taxpayer to show that the information is non-obvious. The taxpayer appears to be in a similar position as the patentee in regards to the burden of proof relating to inventiveness. For this reason the four-step inquiry, as established in the *Ensign Brickford*, case enjoys even greater relevance seeing as in both cases (IP law and tax law) the inventor/taxpayer carries the burden of proof in regards to showing inventiveness.

Jurisprudence following the *Ensign Brickford* judgement has since then elaborated on the steps of the four-step-inquiry. The guidance provided by these judgements will be studied below especially in regards to:

- What comprises the *state of the art* when considering obviousness (step 2),⁸⁷
- What considerations are made when evaluating obviousness (step 4),⁸⁸ and
- What entails a “person skilled in the art (step 4)”.⁸⁹

The above considerations pertain to steps 2 and 4 of the 4 step inquiry. It is submitted that steps 1 and 3 are subjective and are unique to every case being considered. Steps 2 and 4 however are objective, of an academic nature, and form the central inquiry to every claim being considered.

Below follows a detailed study of steps 2 and 4.

4.3.2. What comprises the *state of the art* (step 2)

The *state of the art* is the same as that against which the novelty of an invention is assessed, i.e. all matter which has been made available to the public by written or oral description, by use or in any other way. The only notable distinction between the two is that the mosaic rule finds no application when assessing inventiveness. In other words the doctrine that one cannot establish anticipation by making a “mosaic” of prior publications is not applicable to obviousness. The prior art *as a whole* must be considered when assessing inventiveness. In *Transvaal and Orange Free State Chamber of Mines v Hukki*⁹⁰ Galgut, J. had regard to all prior art in assessing whether the patent involved an inventive step:

“The evidence leaves no doubt that each of the three integers claimed is part of the common knowledge in the art. It is also clear that in operating tumbling mills it is common knowledge that speed and volume of load (between the limits of 25 per cent and 60 per cent) and weight or mass of load are variables which must be adjusted by the mill operator to achieve the best results. *If one has regard to all the above*⁹¹ it seems to me clear that the respondent cannot contend that the mere choice of a speed for autogenous grinding or any other grinding is an inventive step. ...

⁸⁷ Refer to 4.3.2 What comprises the *state of the art* (step 2).

⁸⁸ Refer to 4.3.3 Considering “obviousness” (step 4).

⁸⁹ Refer to 4.3.4 What entails a “person skilled in the art”.

⁹⁰ [1964] 3 All SA 96 (T).

⁹¹ Emphasis added.

*It may well be that a combination of commonly known steps may be patentable if the combination is in itself inventive.*⁹² In the present case the combination consists merely of a reference to a relationship between commonly known variables which does not involve ingenuity.⁹³

Refer below⁹⁴ for a further discussion on the matter.

4.3.3. Considering “obviousness” (step 4)

The Patents Act deems an invention to involve an inventive step if it is not obvious to a person skilled in the art. The fourth step of the *Ensign Brickford* inquiry deals with the question whether the inventive step claimed can be regarded as obvious to a person skilled in the art. A magnitude of decisions dealing with this inquiry was laid down under the former Patents Act. Although the former Patents Act is no longer in effect, the decisions laid down in this regard are still applicable.⁹⁵ The factors considered by the court in assessing inventiveness will be discussed below.

4.3.3.1. Substantial improvement or step forward

An inventive step requires inventive ingenuity. The fact that an invention has brought about a substantial improvement in a certain field or has led to an important step forward in that field is not enough to establish inventiveness.⁹⁶ Wessels, J.A held:

“However new or striking the application may be, if in so doing the engineer has only used the knowledge of the time and has not had recourse to invention, he has no more right to a monopoly than anyone else who judiciously uses that which science has put into his hands.”⁹⁷

⁹² Emphasis added.

⁹³ *Transvaal and Orange Free State Chamber of Mines v Hukki* [1964] 3 All SA 96 (T) at page 106.

⁹⁴ Refer to 4.3.3.4 Combination of old ideas.

⁹⁵ Steyn *The Law of South Africa* (2010).

⁹⁶ *Marine Construction & Design Co v Hansen’s Marine Equipment (Pty) Ltd* 1972 2 SA 181 (AD) 196G-H.

⁹⁷ *Veasy v Denver Rock Drill and Machinery Co Ltd* 1930 AD 243 at page 276.

Furthermore, a step can be considered to be inventive even if it only represents a step “sideways”, for instance when an alternative is provided and not necessarily an improvement, provided that the alternative still involves inventive ingenuity.⁹⁸

From the above it is clear that a substantial improvement or step forward is not a requirement for inventiveness, however it is submitted that such an improvement or step forward is likely to lessen the burden of proof.

4.3.3.2. Reasonable probability

Where the nature of the previous art is such, that the invention is something a person skilled in the art would naturally try, there is no inventive step.⁹⁹ The prior knowledge need not be absolute or definite knowledge in order to prove obviousness; it must merely result in a reasonable probability that a skilled person would have been led to do the experiment. In the *Transvaal & OFS Chamber of Mines* case, Galgut, J. held that the choice of speed of operating a grinder was not an inventive step given that prior art has put forward the use of supercritical speeds in tube milling as advantageous. It was therefore reasonably probable that a person skilled in the art would attempt drilling by selecting a supercritical speed in the suggested range. Galgut, J. held that:

“White described and examined rotation at supercritical speeds as a substantial possibility, and whilst it is true that even after his publications in 1905 and 1915 supercritical speeds were not used in practice, the publication by Fahrenwald and Lee and Fahrenwald in 1931 and 1934 put forward the use of supercritical speeds in tube milling as advantageous.

There can be no doubt from the evidence and publications that speed is but one of many variables which has to be taken into account in the design and operation of mills. In the light of the above, the respondent could certainly not claim that the mere choice of a speed of operation for grinding is an inventive step”¹⁰⁰

⁹⁸ *B-M Group (Pty) Ltd v Beecham Group Ltd* 1980 2 All SA 531 (A); 1980 4 SA 536 (AD) 557A-D.

⁹⁹ *Testrup v Crosfield & Sons Ltd* 1913 AD 1 at page 14.

¹⁰⁰ *Transvaal and Orange Free State Chamber of Mines v Hukki* [1964] 3 All SA 96 (T) at pages 105-106.

In the alternative, when an invention is so much out of track of previous work as not to suggest itself naturally to a person considering the problem, an inventive step will be present.¹⁰¹

4.3.3.3. *Production of a practical result*

The mere production of a practical result does not by itself render the invention non-obvious.¹⁰² Likewise, the perception and disclosure of previously unrealised advantages in a known article or process in itself is not sufficient proof of inventiveness.¹⁰³

Where a method is known in general application and that method is applied to a particular purpose one can only claim inventiveness if special problems had to be overcome in order to apply that method to the particular purpose.¹⁰⁴

4.3.3.4. *Combination of old ideas*

As mentioned above, in assessing inventiveness one must have regard to the prior art as a whole, i.e. the mosaic rule finds no application. This increases the burden of proof in showing inventiveness as compared to showing novelty. In proving novelty, one can rely on the fact that although the invention consists of a combination of previously known facts, the particular combination was not contained in a prior single publication and therefore qualifies as a new invention. However, when proving inventiveness it is irrelevant whether the combination was contained in a single publication or in several prior publications. The prior art as a whole is considered. This however does not mean that a combination of previously known facts will never be inventive. The courts have recognised that where individually known elements are combined in a new functional combination, a valid patent may be obtained, i.e. the invention is non-obvious.¹⁰⁵ The real and ultimate question in evaluating a claim

¹⁰¹ *Hills v Livingstone-Jackson* 1935 NPD 5 at page 17.

¹⁰² *Testruip v Crosfield & Sons Ltd* 1914 AD 1 at page 14.

¹⁰³ *Transvaal and Orange Free State Chamber of Mines v Hukki* [1964] 3 All SA 96 (T).

¹⁰⁴ *Drummond-Hay v Fram & Co (Pty) Ltd* 1963 3 All SA 370 (A).

¹⁰⁵ In the *Transvaal & Orange Freestate Chamber of Mines v Hukki* [1964] 3 All SA 96 (T), Galgut, J. held at page 106 that "It may well be that a combination of commonly known steps may be patentable if the combination is in itself inventive."

for a combination is: “is the combination obvious or not?”.¹⁰⁶ In making this assessment the courts have warned against an approach that examines each element in isolation in order to see whether its use was obvious or not, seeing as it tends to obscure that the invention claimed is a *combination*.¹⁰⁷ Hopely, J. summarised it as follows:

“It is true that, although these things may be obvious the combination may be ingenious.”¹⁰⁸

4.3.3.5. *Commercial success*

Patentees have often relied on the fact that a particular invention has achieved commercial success in order to prove inventiveness. However, the presence of commercial success does not always establish inventive ingenuity, just as the converse is not necessarily true, namely that the absence of commercial success establishes absence of inventive ingenuity.¹⁰⁹ In the *Ensign-Brickford* case Plewman, J.A. held that:

“Firstly the question to be determined is whether what is claimed as inventive would have been obvious not whether it would have been commercially worthwhile.”¹¹⁰

The appellate division of the UK dealt with this issue in particular detail. In the case before the court, i.e. *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*¹¹¹ the defence for the plaintiff argued that seeing as the prior publication¹¹² did not generate any interest as it was not perceived as a commercially worthwhile concept, the subsequent improvement of the invention described by Darby cannot be viewed as being obvious. The argument led:

¹⁰⁶ Steyn *The Law of South Africa* (2010).

¹⁰⁷ *Vine v Barratt & Pillans Ltd, West Rand Engineering Works (Pty) v Varratt & Pillans Ltd* 1939 WLD 238 above 252.

¹⁰⁸ *Ransby & Covell v Woudberg* (1907) 24 SC 91 at page 98.

¹⁰⁹ Steyn *The Law of South Africa* (2010).

¹¹⁰ *Ensign-Brickford (SA) (Pty) Ltd and others AECI Explosives and Chemicals Ltd* [1998] 4 All SA 453 (A) at page 461.

¹¹¹ [1985] R.P.C (G.B.) Ltd.

¹¹² An article written by a Mr Darby entitled “Sailboarding: Exiting New Water Sport”.

“...although he accepts Darby as a relevant document which could be assumed to be within the knowledge of the skilled man, nevertheless, when considering whether the patent in suit is an obvious development, one has to consider what a person confronted with Darby in 1966 would actually have done. If, he suggests, there was then no reason for considering Darby to be of any interest, the improvement of Darby, even by what might be considered mere workshop trial and error, would not have been obvious.”¹¹³

The defence for the plaintiff was therefore of the view that the improvements to the Darby invention effected by the plaintiff, rendered a previously non-practical invention commercially worthwhile and for this reason the patent in suit should be viewed as non-obvious. Oliver, J., in his judgement, disagreed with this argument and held that such a view obscures the real question. The real, and only, question for consideration according to Oliver, J. is:

“What has to be determined is whether what is now claimed as inventive would have been obvious, not whether it would have appeared commercially worthwhile to exploit it.”¹¹⁴

Oliver, J. goes on to say:

“In summary, Mr Pumfrey’s submission is that in 1966 nobody would have considered Darby as more than a beach novelty ... and that, therefore, nobody would in fact have been interested in doing anything more than, perhaps, building it and playing with it. Thus, the argument proceeds, there would not have been any reason for developing Darby and hence no development, even of a routine nature, would have been obvious or even have occurred to the skilled man, who would merely have dismissed Darby as a not very practical toy. It is from this foundation that he goes on to submit that the learned judge asked himself the wrong question and wrongly accepted as evidence of what was obvious the evidence of witnesses as to how Darby might have been improved, for, in suggesting improvements to or embellishments upon that which called for no improvement or embellishment, they were doing so in response to an invitation to treat Darby as a springboard to further development and invention and were in fact suggesting inventive steps.

We have not felt able to accept Mr. Pumfrey’s submissions.”¹¹⁵

¹¹³ *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd* [1985] R.P.C (G.B.) Ltd at lines 18-25, page 72.

¹¹⁴ *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd* [1985] R.P.C (G.B.) Ltd at lines 49-51, page 72.

From the above judgement it is again made clear that the only question for consideration is whether the step claimed to be inventive would have been obvious to a person skilled in the art even though the prior art did not raise any commercial interest at the time of its publication.

It is however submitted that the achievement of commercial success will lessen the burden of proof for the patentee claiming inventiveness. However, if there is any indication that the commercial success was the result of external factors such as effective advertising, the court seldom has regard to the commercial success in considering inventiveness.¹¹⁶

4.3.4. What entails a “person skilled in the art”

The meaning of the term “person skilled in the art” is crucial in the evaluation of inventiveness as it marks the level of skill against which the new invention is to be evaluated. However, within a specific art, various levels of skill exist. In this regard, the Patents Act is silent on the level of skill to be used as a measuring tool, i.e. the ordinary worker or the field expert. Furthermore, the Patents Act is silent on the level of knowledge to be attributed to the skilled worker, i.e. ordinary working knowledge used in day-to-day operations or all the materials forming part of the state of the art.

The answers to these questions will have a significant influence on the ambit of the test for inventiveness. For this reason, a study of the meaning and scope of the term will be conducted below.

As mentioned above, the Patents Act does not contain a definition of what constitutes a ‘person skilled in the art’. The EPO Guidelines, however, contains the following definition:

“The ‘person skilled in the art’ should be presumed to be a skilled practitioner in the relevant field, who is possessed of *average knowledge and ability* and is aware of what was *common general knowledge* in the art at the relevant date. ... He should also be

¹¹⁵ *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd* [1985] R.P.C (G.B.) Ltd at lines 30-45, page 73.

¹¹⁶ *Miller v Boxes & Shooks (Pty) Ltd* 1945 AD 561 above 586.

presumed to have had access to everything in the “state of the art”, ... and to have had at his disposal the normal means and capacity for routine work and experimentation.”¹¹⁷

In formulating the test for inventiveness, the Supreme Court of Appeal¹¹⁸ shed further light on the meaning and scope to be applied to a “person skilled in the art”. The test was formulated as follows:

“Whether or not the *ordinary person* skilled in the relevant art could, if faced with the problem solved by the invention, and having regard to what was *common knowledge* in the art at the time, and using his intelligence, easily have provided the solution or taken the step taken by the patentee.”¹¹⁹

From the above the following becomes apparent:

- The *ordinary worker* in the art is to be referred to as opposed to experts in the particular field;
- The worker is presumed to have an *average knowledge and ability*;
- The worker is presumed to be aware of what constitutes *common knowledge* in the field; and
- The worker is presumed to have access to everything in the *state of the art*, i.e. public knowledge.

From the above it is apparent that there is a distinction between common knowledge in the art and public knowledge. The EPO Guidelines presume a person skilled in the art to *possess* common knowledge in the art and to have *access* to everything in the *state of the art*, i.e. public knowledge.¹²⁰ From these two distinct attributes it is clear that public knowledge encompasses common knowledge, whereas public knowledge will not always be common knowledge in a particular art. In the *Transvaal and OFS Chamber of Mines* case, the distinction between common knowledge and

¹¹⁷ European Patent Office *Guidelines for Examination in the European Patent Office* (2010) Part C, Chapter IV, pages 32-33.

¹¹⁸ *Marine Construction & Design Co v Hansen's Marine Equipment (Pty) Ltd* above 193A-C.

¹¹⁹ above 193A-C.

¹²⁰ In section 25(6) of the Patents Act the “state of the art” is defined to comprise all matter which has been made available to the public by written or oral description, by use or in any other way.

public knowledge was elucidated by the construction placed on “common knowledge” by the court. Galgut, J. held:

“It was pointed out that not everything in a known publication is common knowledge. There must be something more. But that something more need not be “acceptance” in the sense that the views of the writer are unreservedly accepted as a solution of some problem in the art, or his suggestions put into operation. It is sufficient that the disclosure is accepted by the bulk of those engaged in the art, in the sense that it “becomes part of their common stock of knowledge relating to the art”.¹²¹

A clear distinction between the two concepts was also drawn in the *Gentiruco* case. Trollip, J.A. held:

“As previously mentioned, Veasy’s case adopts throughout the inquiry into inventiveness the criterion of common knowledge. That might conceivably be something less than the state of the prior art, for the latter might include the information of learning of some highly skilled or erudite workers or specialists in the art or science, which is unknown to the general body of ordinary, skilled or qualified workers.”¹²²

Trollip, J.A. further emphasizes that the knowledge to be regarded when assessing inventiveness is the knowledge which the ordinary skilled worker *already possess* and not the knowledge *accessible* to him. He held:

“The knowledge available” is used synonymously with “what was generally known”, and it means nothing more than common knowledge in the sense discussed above. It does not mean, as Firestone contended, “the knowledge accessible” to the ordinary mechanic in libraries or other repositories of publications. The knowledge is such, according to the passage, as would have enabled the ordinary mechanic, when confronted by the inventor’s problem, to take the step *easily* himself. That points irresistibly to knowledge with which he is *already equipped*, that he already carries about with him in his mind, and not that which he has to seek out in a library, etc. The contention for Firestone confuses public knowledge with common knowledge. The former is the knowledge that is accessible to the public by reason of its having been published; the latter is the knowledge in fact possessed by the generality of persons duly qualified or skilled in the particular art or science.”¹²³

¹²¹ *Transvaal and Orange Free State Chamber of Mines v Hukki* [1964] 3 All SA 96 (T) at page 105.

¹²² *Gentiruco AG v Firestone SA (Pty) Ltd* [1972] 1 All SA 201 (A) at page 261.

¹²³ *Gentiruco AG v Firestone SA (Pty) Ltd* [1972] 1 All SA 201 (A) at page 261.

From the above dictums it is clear that not all published knowledge, i.e. public knowledge, can be considered to form part of the common working knowledge of the ordinary skilled worker. In order for a published article to be considered part of the common knowledge of the ordinary skilled worker, the article must be accepted by the majority of the art craftsmen in such a way that it becomes part of their general stock of knowledge. The knowledge attained from the publication is not required to be put into use by the ordinary skilled worker. It must merely form part of his working knowledge of the art in which he operates.

Common knowledge is the working knowledge required of an ordinary skilled worker in a particular art. It is this common knowledge that the court presumes a person skilled in the art to draw on in the court's evaluation of whether the step forward is one to have been easily taken by the worker.

This, however, does not mean that no regard is to be had to public knowledge in this assessment. The EPO Guidelines define a person skilled in the art to have access to everything in the *state of the art*. Furthermore, section 25(10) of the Patents Act stipulates that regard must be had to the *state of the art* when assessing inventiveness. It is therefore submitted that although it is the worker's common knowledge that serves as criteria for inventiveness, this knowledge should be evaluated bearing in mind that the worker has access to all prior art in order to supplement any shortcomings in his common knowledge.

Therefore, if the ordinary skilled worker applies his intelligence to the problem presented and he, upon drawing on his common knowledge in the field, easily finds the solution to the problem presented, the steps taken to solve the problem cannot be viewed to be inventive. This will be the case whether the ordinary skilled worker researched prior art to supplement any shortcomings in his common knowledge utilised to solve the problem or not.

4.4. Conclusion

In order for an invention to be considered “non-obvious” in terms of the Patents Act, the invention claimed must be non-obvious to a person skilled in the relevant art. In making this assessment, regard is to be had to all prior art as a whole. The mosaic rule finds no application when considering “obviousness”. Therefore, if the invention claimed is a combination of old ideas, and the combination in itself is not obvious to a person skilled in the art, the invention will be considered non-obvious.

The test formulated by our courts to test for obviousness is whether an ordinary person skilled in the art would have easily solved the problem faced by the inventor by using his intelligence and having regard to what was *common knowledge* in the art at the time. Common knowledge refers to the working knowledge possessed by the ordinary worker and does not encompass all published knowledge or prior art. The ordinary worker may however in his quest to solve the problem presented to him, have recourse to prior art, but it is presumed that reliance on his common knowledge alone would have easily led him to find the answer so sought.

In assessing obviousness, the courts have made it clear that the only real question to be asked is whether the step taken was an obvious one. Secondary factors such as a significant advance in the field, the production of a practical result or the achievement of commercial success may only serve to lessen the burden of proof, but it does not in itself prove that the invention claimed is non-obvious in nature.

The R&D incentive article refers to a “discovery” of novel, practical and non-obvious information. However, patent law denies discoveries the status of an “invention” and therefore the benefit of patent protection. The meaning of “novel” in Chapter 3 and the meaning of “non-obvious” in Chapter 4 were studied with reference to IP law and jurisprudence, hence as it applies to an invention. Chapter 5 will study whether the exclusion of discoveries as an invention will have any effect on the meanings of “novel” and “non-obvious” as applied to the discovery of information for purposes of the R&D tax incentive.

CHAPTER 5

The construction of “novel” and “non-obvious” for purposes of the R&D tax incentive

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5.1. Introduction

In Chapters 3 and 4 the meaning of “novel” and “non-obvious” was studied in terms of IP law and jurisprudence. As mentioned in Chapter 2, the Patents Act distinguishes between an ‘invention’ and a ‘discovery’ by specifically excluding ‘discoveries’ from the scope of an invention.¹²⁴ Hence the meaning of “novel” and “non-obvious” was construed by our IP courts in the context of an ‘invention’.

Attorneys, Sibanda & Zantwijk submit that a “discovery” presupposes a pre-existing, intangible asset while an invention results in something new.¹²⁵ This raises the question whether the construction placed on “new” and “non-obvious” in relation to an *invention*, could be applied *mutatis mutandis* to a *discovery* as envisaged by section 11D(1)(a) of the Income Tax Act.

This chapter aims to address this issue and will commence with a study of the difference in nature between an *invention* and a *discovery*, followed by an assessment of the effect this difference holds and will conclude in a final construction to be placed on the meaning of “new” and “non-obvious” with regards to a discovery of information.

5.2. Invention v discovery

5.2.1. Invention

For purposes of the Patents Act, Section 2 of the said act defines an invention as one for which a patent may be granted under section 25. This definition however only defines the characteristics required of an invention for purposes of patent protection in terms of the Patents Act. It does not define the nature of an invention. Therefore, the word, “invention” must be given its ordinary dictionary meaning.¹²⁶

The *Oxford Dictionary of English* defines an “invention” as:

¹²⁴ Section 25(2) of the Patents Act.

¹²⁵ Sibanda & Zantwijk *S11D: R&D Tax Incentive – Discussion Document* (2007) 6.

¹²⁶ Clegg & Stretch *Income Tax in South Africa* (2007) 2.6.

“**noun** [mass noun] the action of inventing something, typically a process or device”¹²⁷

The word “invent” is furthermore defined as:

“**verb** [with obj.] create or design (something that has not existed before); be the originator of”¹²⁸

From the above it is clear that an invention results in something being created that has never existed before. The invention is therefore completely *new* in all regards.

5.2.2. Discovery

Neither the Patents Act nor the Income Tax Act defines a “discovery”. The word must therefore be given its ordinary dictionary meaning.¹²⁹

According to the *Oxford Dictionary of English*, a discovery is:

“**noun** (pl. discoveries) [mass noun] **1** the action or process of discovering or being discovered”¹³⁰

The word “discover” is furthermore defined as:

“**verb** [with obj.] **1** find unexpectedly or during a search: ... ■ become aware of (a fact or situation): ... ■ be the first to find or observe (a place, substance, or scientific phenomenon): ... ■ be the first to recognise the potential of (an actor or performer): ...”¹³¹

From the above, it is clear that the act of discovering, results in finding something that *already exists*.¹³² The discoverer is therefore not the originator, as is the case with an invention. The crux of a discovery however, is that the discoverer is *the first* to find such thing.

¹²⁷ *Oxford Dictionary of English* (2010) 919.

¹²⁸ *Oxford Dictionary of English* (2010) 919.

¹²⁹ Clegg & Stretch *Income Tax in South Africa* (2007) 2.6.

¹³⁰ *Oxford Dictionary of English* (2010) 500.

¹³¹ *Oxford Dictionary of English* (2010) 500.

¹³² “For example, discovering the characteristics of a compound which already exists in nature but which are, prior thereto, unidentified” (Tshaya *Section 11D – Research and Development Incentive* (2010) 16.).

In summation, an invention results in the *creation* of something which did not exist before, i.e. something *new*. A discovery, on the other hand, involves the act of *finding* something which *already exists*.

It is apparent that there is a vast difference between the ordinary meaning of an *invention* and the ordinary meaning of a *discovery*. Characteristics such as being “new” and involving an “inventive step”¹³³ appear to be unique to an invention. Nonetheless, the Income Tax Act refers to the “discovery of novel, practical and non obvious information”.¹³⁴ This appears to be paradoxical in nature, seeing as a discovery is the act of finding something which already existed and which therefore cannot be something new.

From the above it is clear that the construction placed on “new” and “non-obvious” by IP jurisprudence cannot blindly be adopted for purposes of section 11D(1)(a) of the Income Tax Act. This is due to the vast difference in nature between an “invention” and a “discovery”. Below, the effect of this difference on the construction¹³⁵ to be adopted for purposes of the R&D incentive section¹³⁶ will be considered.

5.3. Considering the effect of the difference between an *invention* and a *discovery* on the construction of “novel” and “non-obvious” in terms of section 11D(1)(a) of the Income Tax Act

5.3.1. Novelty

As mentioned above, to use the terms “discovery” and “new” alongside each other seems paradoxical in nature. Although the R&D tax incentive section refers to “novel” information, the word “novel” originates from the Latin word “*novus*” which means “new”.¹³⁷

Attorneys, Sibanda & Zantwijk are of the opinion that:

¹³³ Section 25(10) of the Patents Act deems an invention to involve an inventive step if it is not obvious to a person skilled in the art, having regard to the *state of the art* at the priority date.

¹³⁴ See section 11D(1)(a).

¹³⁵ *Vis-à-vis* novelty and obviousness.

¹³⁶ Section 11D(1)(a) of the Income Tax Act.

¹³⁷ *Oxford Dictionary of English*, 2010:1215.

“The terms “discovery” (in the pre-existing sense) and “novel” are not necessarily mutually exclusive: “Novel” means “strikingly new, unusual, or different”; and “new” is generally defined in our Patents and Designs Acts as information which does not “form part of the *state of the art*, ... [i.e. excluding] *all matter which has been made available to the public (whether in the Republic or elsewhere) by written or oral description, by use or in any other way*.”¹³⁸

The argument raised by attorneys, Sibanda & Zantwijk is that the information discovered can still be regarded as “new” as long as it did not form part of the public domain prior to the discovery thereof.

Therefore, it is submitted that the difference in nature between a discovery and an invention does not hinder the adoption of the meaning of “new” as construed by IP jurisprudence in interpreting the novelty requirement for purposes of the R&D tax incentive section. The Patents Act regards an invention as new, if it did not form part of the *state of the art* prior to the invention thereof. Likewise, a discovery can be regarded as new if it did not form part of the *state of the art* prior to the discovery thereof. Thus, despite the fact that the information discovered already existed prior to the discovery thereof, it can still be regarded as new in terms of the definition of “new” of the Patents Act.

However, the difference in the wording used between the two Acts is one that cannot be overlooked. The Income Tax Act uses the word “novel” whereas the Patents Act uses the word “new”. Although, as mentioned above, the word “novel” originates from the Latin word “*novus*” which means “new”, the two words bear slightly different ordinary meanings. This raises the question why the legislature would use the word “novel” and not the word “new” as is used by the Patents Act. If his intention was to subject a discovery to the same requirements as is set for an invention in regards to patent protection, why use different wording?

Before attempting to answer the above question, the difference in meaning between “new” and “novel” must be studied.

The Oxford Dictionary of English defines “novel” as:

¹³⁸ Sibanda & Zantwijk *S11D: R&D Tax Incentive – Discussion Document* (2007) 6.

“adjective interestingly new or unusual”¹³⁹

“Unusual” is further defined as:

“adjective not habitually or commonly occurring or done”¹⁴⁰

From the above it is clear that the ordinary meaning of ‘novel’ can encompass the discovery of information that did form part of the public domain prior to the discovery thereof but is not commonly encountered or observed in the public domain.

The ordinary meaning of “novel” has a greater ambit than the meaning of “new” as construed by IP law. Thus, if the ordinary meaning of “novel” is to be adopted in interpreting section 11D(1)(a) of the Income Tax Act, a greater number of discoveries will qualify for the R&D tax incentive allowance as opposed to adopting the meaning of “new” as construed by IP law.

In deciding which interpretation should be followed (i.e. the more liberal or restrictive construction), the intention of the legislature with the enactment of the provision should be sought and given effect to. In Chapter 2, it was shown that the intention of the legislature with the enactment of section 11D was to stimulate R&D activities of a scientific and technological nature which would result in *new* knowledge and not merely represent routine learning activities as part of ongoing processes.

The Explanatory Memorandum issued on the enactment of section 11D makes it clear that it was the intention of the legislature to stimulate R&D activities which would result in *new* knowledge. It is therefore submitted that the word “novel” is to be interpreted in the strict sense, thus awarding it the meaning of “new” as construed by IP law in order to give effect to the intention of the legislature.

By following such a restrictive approach, only discoveries made of information which did not form part of the *state of the art* prior to the discovery thereof, will qualify for the 150 per cent R&D incentive allowance.

¹³⁹ *Oxford Dictionary of English* (2010) 1215.

¹⁴⁰ *Oxford Dictionary of English* (2010) 1953.

This view is also supported by Darren Margo, a registered patent attorney and tax practitioner, who held:

“At the heart of both the law of patents and designs is the concept of ‘novelty’ and what it means to be ‘new’. Essentially, an invention is patentable and a design is registerable only in cases where very strict novelty requirements are satisfied. Equally fundamental in the field of patent law is the principle of ‘inventiveness’, which also has its own peculiar meaning. Over the decades, these technical and specific definitions have been established, applied and interpreted rigorously and carefully by our courts.

In Note 50, however, instead of referring to the wealth of jurisprudence on the matter, SARS has elected to re-event the proverbial wheel – by attempting its own definitions and standards for these critical terms.”¹⁴¹

Such a restrictive approach is further supported by the fact that the nature of a discovery implies that the discoverer is *the first* to find such a thing. This effectively excludes any *unusual* information seeing as it already formed part of the *state of the art* prior to the “discovery” thereof. Thus, the discoverer would not be the first to find such information. The fact that the information is not commonly encountered or observed in the public domain is irrelevant.

In adopting this view, the meaning of “new” as laid out in Chapter 3 is to be adopted *mutatis mutandis* for purposes of section 11D(1)(a) in regards to the “novel” requirement. As mentioned in Chapter 3, the Patents Act deems an invention to be new if it did not form part of the *state of the art* on the priority date. The *state of the art* comprises all matter made available to the public, both local and international, by written or oral description, use or in any other way.¹⁴² A discovery will therefore be regarded as “novel” if the discoverer was the first to find such information which already existed, but did not form part of the public domain, i.e. the *state of the art* at the date of the discovery.

¹⁴¹ Margo “An Assault on the Taxpayer and on Practitioners – by SARS” 2009(December) *De Rebus* 39-40. Margo criticizes SARS’ adoption of the *ordinary meaning* of the words “novel” and “non-obvious”. He states that these terms have been interpreted rigorously and carefully by our IP courts and that such wealth of jurisprudence should be referred to in interpreting section 11D(1)(a) of the Income Tax Act.

¹⁴² Section 25(6) of the Patents Act.

5.3.2. Non-obvious

The Patents Act regards an invention to involve an inventive step if it is not obvious to a person skilled in the art.¹⁴³ As laid out in Chapter 4, the test formulated by our courts to test for obviousness, in the context of IP law, is whether an ordinary person skilled in the art, using his intelligence, would have easily created the invention claimed by the inventor to be non-obvious, having regard to what was common knowledge¹⁴⁴ in the art at the time.

As mentioned above, the act of inventing, results in something being created that did not exist before, whereas a discovery involves the act of being the first to find something that already existed. There is no apparent reason why the test formulated to assess “obviousness” cannot be adopted *mutatis mutandis* for the purposes of evaluating obviousness in terms of section 11D(1)(a) of the Income Tax Act.

However, before such meaning is adopted, the ordinary meaning of the word is to be studied. The *Oxford Dictionary of English* has no definition for the word “non-obvious” but it does define the word “obvious” as:

“**adjective** easily perceived or understood; clear; self-evident; or apparent”¹⁴⁵

From the above it can be inferred that “non-obvious” means that something is *not* easily perceived or understood by the ordinary man. The interpretation awarded to “non-obvious” by the Patents Act however has a much narrower interpretation of “non-obvious” in that it specifies that the invention must not be obvious to a person skilled in the art. It is clear that there is a vast difference in the ambit of the two interpretations (i.e. ordinary meaning versus the IP law meaning).

Once again, in deciding which interpretation should be followed (i.e. the more liberal or restrictive construction), the intention of the legislature with the enactment of the

¹⁴³ Section 25(10) of the Patents Act.

¹⁴⁴ Common knowledge refers to the working knowledge possessed by the ordinary worker and does not encompass all published knowledge or prior art. The ordinary worker may however in his quest to solve the problem presented, have recourse to prior art, but it is presumed that reliance on his common knowledge alone would have easily led him to find the answer sought.

¹⁴⁵ *Oxford Dictionary of English* (2010) 1226.

provision should be sought and given effect to. It is clear that the legislature had in mind the advancement of technology and science in order to achieve sustained growth in South Africa with the enactment of section 11D(1)(a). The field of science and technology is a specialist field, and one not commonly understood by the ordinary man. Thus, inherent in the “non-obvious” requirement is the presumption that the discovery must be non-obvious to a person skilled in the art, seeing as the discovery will only qualify for the tax incentive if the information is of a scientific and technological nature.

It is therefore submitted that the “non-obvious” requirement should be awarded the same meaning as laid down by IP jurisprudence in terms of inventions as the ordinary meaning of the word will not give effect to the intention of the lawgiver.

This submission is also supported by Patent Attorney, Darren Margo.¹⁴⁶

Therefore, it is submitted that the discovery of information will be regarded as non-obvious for purposes of section 11D(1)(a) of the Income Tax Act if the information discovered is not obvious to the ordinary worker skilled in the art, having regard to what formed part of the *state of the art* on the relevant date.

5.4. Conclusion

A study of the ordinary meaning of an ‘invention’ and a ‘discovery’ has shown that an invention results in the creation of something which did not exist before, whereas a discovery involves the act of being the first to find something which did exist before.

The difference in nature between an invention and a discovery however does not hinder the adoption of the meaning of “novel” and “non-obvious” for purposes of the R&D tax incentive in the context of a discovery. A discovery, like an invention, can be regarded as “new” if the information discovered did not form part of the *state of the art* prior to the discovery thereof. Furthermore, a discovery, like an invention, can be regarded as non-obvious if the information discovered is not obvious to the ordinary worker skilled in the art, having regard to the *state of the art* on the relevant date. The fact that the Patents Act denies discoveries the status of invention,

¹⁴⁶ Refer to 5.3.1 (page 50) above.

therefore presents no hindrance in adopting the meanings of “new” and “non-obvious” for purposes of section 11D(1)(a) of the Income Tax Act.

In construing section 11D(1)(a) of the Income Tax Act, the ordinary meanings of “novel” and “non-obvious” were also considered.

Something is novel if it is strikingly new or unusual. The ordinary meaning of “novel” has the effect that the discovery of information which formed part of the public domain prior to the discovery thereof will still qualify for the tax incentive provided that it was not commonly encountered or observed in the public domain.

Something is non-obvious if it is not easily perceived or understood by the ordinary man. The ordinary meaning of non-obvious has the effect that the discovery of information which is obvious to a person skilled in the art will still qualify for the tax incentive provided that the information discovered is not obvious to the ordinary man.

It was submitted that the adoption of the ordinary meanings of “novel” and “non-obvious” will result in section 11D(1)(a) having an ambit which is far greater than the legislature intended it to be. The intention of the legislature with the enactment of section 11D was to stimulate a very specific kind of R&D activity in order to achieve sustained economic growth over the long term. Any construction which would result in basic R&D activities qualifying for the incentive will be counter-productive to the intention of the legislature as it will not result in the creation of new knowledge of a scientific or technological nature.

Thus, in order to give effect to the intention of the legislature, it is submitted that the meanings attributed to “novel”¹⁴⁷ and “non-obvious”¹⁴⁸ in terms of IP jurisprudence should be adopted *mutatis mutandis* for purposes of section 11D(1)(a) of the Income Tax Act.

¹⁴⁷ Refer Chapter 3.

¹⁴⁸ Refer Chapter 4.

CHAPTER 6

Computer programs – A contentious issue

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6.1. Introduction

As mentioned in Chapter 1, patent attorney Darren Margo highlighted several issues providing particular heartache to taxpayers in his article concerning the new R&D tax incentive. In particular he criticised SARS' interpretation of the "novelty" concept and the exclusion of "internal business processes" from R&D activities as applied to the development of computer programs.

The first part of this study was devoted to providing guidance on the interpretation of the concepts of "novelty" and "non-obviousness" in the context of the discovery of information as an eligible R&D activity. The second part of this study will address what is considered to be the most contentious issue with the newly introduced R&D section at present, i.e. the development of computer programs as an eligible R&D activity especially in the context of the "management and internal business processes" exclusion.

This can be evidenced by several articles published on the issue since the release of SARS' Interpretation Note 50 in 2009.

Margo is of the opinion that SARS' interpretation is so draconian that it destroys the incentive entirely:

"The incentive is qualified elsewhere in the Act – specifically in s 11D(5)(b) – by an exclusion against expenditure relating to 'management or internal business process'. So, for example, work conducted on creating computer programs to integrate payroll applications with SAP systems in a taxpayer's business would not qualify for a s 11D deduction. This exclusion is in line with *Frascati*.

SARS, however, has taken this exclusion to staggering extremes. In Note 50, it has adopted an interpretation so draconian that even companies such as Microsoft, Sun Microsystems and SAP – all world-leaders in this field of technology – would fail to qualify for the deduction. In this case too, SARS appears unwilling to provide even one example of a software-related activity that would qualify for the deduction under its interpretation. It bears mentioning that as far as I am aware, no other revenue authority anywhere in the world, adopts a view as severe as this."

Simply put: While our legislature has created legislation, insisting that this incentive must be granted to developers of software, SARS has interpreted the qualification so narrowly that it has effectively destroyed the incentive entirely.”¹⁴⁹

Patent attorney with Adams & Adams, Tumelo Tshaya is of the opinion that the interpretation of the exclusion as applied to computer program development is a litigious matter:

“The South African Revenue Service (SARS) states that software packages developed for administration, human resources or accounting purposes are excluded from the tax incentive as they constitute management or internal business processes. Moreover, SARS’s view is that all computer programs that automate internal business processes or create management efficiencies, do not qualify, even if the developed program is to be sold to third parties and is not for the company’s internal use. This has a negative effect as it may exclude most software development companies from claiming the research and development deduction. It is a litigious issue and relevant stakeholders can only hope that SARS will, in due course, alter its view.”¹⁵⁰

This issue is also viewed as contentious by audit firms who provide tax services to their clients as per Dawid van der Berg, an associate director of tax at BDO Spence Steward:

“It is worth noting that novelty is not required when it comes to computer programs. However, in terms of section 11D(5) of the Act, no deduction will be allowed in respect of any cost or expenditure relating to ‘management or internal business processes’. Due to a lack of guidance by the courts, this exclusion is highly contentious and taxpayers and the South African Revenue Service are often at odds as to exactly what constitutes ‘management or internal business processes’.”¹⁵¹

This chapter aims to address the above outlined issue by conducting a study of the intention of Treasury with the introduction of the R&D incentive for computer program development and by comparing South Africa’s R&D legislation with the likes of Australia, the United Kingdom (UK) and Canada.

¹⁴⁹ Margo “An Assault on the Taxpayer and on Practitioners – by SARS” 2009(December) *De Rebus* 39-40.

¹⁵⁰ Tshaya “Squeezing Out the Benefits of R&D” 2011(February) *Without Prejudice* 16.

¹⁵¹ Van der Berg “The Section 11D Research and Development Tax Incentive” 2011 *Moneyweb Tax*.

This chapter will commence with a view of the controversial interpretation of SARS which has sparked the above outcry amongst academics, tax advisors and patent attorneys. This will be followed by a study of the Explanatory Memoranda issued by Treasury on the introduction of the R&D legislation in order to attain the intention of the lawgiver in this regard. The *R&D Guidelines* issued by Sibanda & Zantwijk as consultants to Treasury on this section will also be consulted. Hereafter, the R&D provisions relating to computer development as currently enforced in South Africa will be compared to the likes of Australia, the UK and Canada. The chapter will conclude with a recommended construction to be placed on the above exclusion as applied to the development of computer programs as an eligible R&D activity.

6.2. SARS Interpretation

Section 11D was introduced into the South African tax regime during 2006. SARS however only published its Draft Interpretation Note on section 11D during November 2008 with the finalised version of the Interpretation Note, i.e. Interpretation Note 50 following in August 2009. It is clear from the extensive time lapse between the introduction of the section by Treasury and the release of SARS' final interpretation note thereon, that SARS struggled to give meaning to the provisions contained in section 11D of the Income Tax Act.

In construing the type of computer development activities that would qualify for the R&D tax incentive, Interpretation Note 50 refers to the expenditure listed in section 11D(5) as non deductible for purposes of the tax incentive. Included in the list of non-deductible expenditure, are "management or internal business processes" expenses and "market research, sales or marketing promotion" expenses. The Interpretation Note continues to state the following:

"These excluded activities are especially relevant in considering whether the tax incentive applies to computer programs. The development of websites, internet sales systems, or customer satisfaction questionnaires is accordingly not eligible for the deduction as these constitute market research, sales or marketing promotion. Software packages developed for administration, human resources or accounting purposes are similarly excluded from the tax-incentive scheme as they constitute management or internal business processes."

The Interpretation Note goes on to state that:

“Research into developing software for management and internal business processes will therefore not be eligible for a deduction. In this regard it is irrelevant whether such software is developed for use in-house or is developed for the purpose of sale¹⁵² to end-users.”

From the above it is clear that SARS interprets the “management and internal business process” exclusion to be all-embracing, i.e. to apply to both programs developed for in-house use as well as programs developed with the intention of sale or licensing to third parties.

Such an interpretation appears to effectively destroy the incentive given to computer programmers by Treasury as mentioned by Margo. This is due to the fact that:

“By their very nature, computer programs typically fall within the category ‘management or internal business processes’.”¹⁵³

As mentioned in Chapter 2, the intention of the legislature is the determining factor in construing any ‘taxing’ provision. The intention of the lawgiver with the relevant exclusion will therefore be studied below.

6.3. Intent of the Lawgiver

Consultants to treasury, Sibanda & Zantwijk made the following statement in the R&D Discussion document released by them:

“By their very nature, computer programs typically fall within the category ‘management and internal business processes.’ However, Treasury has indicated that where a computer program is developed for more than one sale or licence, this exclusion will not apply. But this is not a legislated test, ...”¹⁵⁴

From a perusal of the Explanatory Memorandum released by Treasury on the introduction of section 11D into the Income Tax Act, no evidence could be found in support of the above statement of Sibanda & Zantwijk, i.e. that Treasury indicated

¹⁵² In this regard refer to the “multiple sales intention” requirement as discussed under the Australian legislation provisions in 6.4.1.2 Computer Software and the “multiple sale” requirement, below.

¹⁵³ Sibanda & Zantwijk *S11D: R&D Tax Incentive – Discussion Document* (2007)9.

¹⁵⁴ Sibanda & Zantwijk *S11D: R&D Tax Incentive – Discussion Document* (2007) 9.

that where a computer program is developed for more than one sale or licence, the exclusion does not apply. The Explanatory Memorandum merely states that:

“Other forms of knowledge falling outside the incentive have been specified and relate to: (a) the prospecting for minerals or exploration for oil and gas, (b) the management and enhancement of internal business processes, (c) trade mark creation, (d) social science and humanities, and (e) market research, sales or marketing promotion.”¹⁵⁵

However, as Sibanda & Zantwijk were consultants to Treasury on this legislation, the above statement made by them should carry some weight in this regard as the full extent of the discussions held with Treasury were not necessarily adopted in the Explanatory Memorandum.

One can otherwise deduce from the Explanatory Memorandum issued by Treasury that the intention of the lawgiver with the introduction of section 11D as a whole was to:

“...ensure that local R&D is not at a global competitive disadvantage.”¹⁵⁶

It is therefore submitted, that in an attempt to ascertain Treasury’s intention with regards to the above exclusion as interpreted in the context of computer program development, one should look at the global trend set by the R&D legislation of other countries in this regard. The goal of Treasury with the introduction of section 11D was to place South Africa on an equal footing with the rest of the global R&D arena. An interpretation securing such an outcome will therefore be justified and in line with the goal sought to be achieved by Treasury.

Hence, the R&D provisions regarding eligible R&D activities (specifically relating to computer program development) of the following tax jurisdictions will be studied below:

- Australia;
- the UK; and
- Canada.

¹⁵⁵ National Treasury *Explanatory Memorandum on the Revenue Laws Amendment Bill, 2006* 8.

¹⁵⁶ National Treasury *Explanatory Memorandum on the Revenue Laws Amendment Bill, 2006* 8.

Section 11D of the Income Tax Act will be compared with the R&D regime of the above countries in order to arrive at an interpretation which will place South Africa on an equal footing with the rest of the global arena.

6.4. The global R&D arena

6.4.1. Australia

6.4.1.1. Eligible R&D activities

Section 73B(1) of the Income Tax Assessment Act 1936 (ITAA 1936) defines “research and development” to mean:

- “(a) systematic, investigative and experimental activities that involve innovation or high levels of technical risk and are carried on for the purpose of:
 - (i) acquiring new knowledge (whether or not that knowledge will have a specific practical application); or
 - (ii) creating new or improved materials, products, devices, processes or services; or
- (b) other activities that are carried on for a purpose directly related to the carrying on of activities of the kind referred to in paragraph (a).”

The development of computer software will therefore qualify as an eligible R&D for purposes of the R&D tax concession provided that the software development entails systematic, investigative and experimental activities, it is novel in its application or has some novel aspect in the way of its functions and it involves the solving of a technical problem which is not readily apparent to an appropriately skilled and experienced software developer. Prior to the ITAA amendments which took effect 1 June 2010, software development had to adhere to an additional requirement in order to qualify as an eligible R&D activity. This additional requirement was referred to as the “multiple sale” requirement and will be discussed below.

Section 73B(2C) of the ITAA 1936 specifically excludes certain activities from eligible R&D activities, but it does not contain an exclusion similar to the ‘management or

internal business process' exclusion contained in the South African R&D tax legislation.

6.4.1.2. *Computer Software and the "multiple sale" requirement*

Prior to the draft legislation which was introduced into law by the Australian Government as from 1 July 2010, the development of computer software had to satisfy the "multiple sale"¹⁵⁷ requirement in order to qualify as an eligible R&D activity.

The "multiple sale" requirement read as follow:

"For the purposes of the definition of research and development activities in subsection (1), activities carried on by or on behalf of an eligible company by way of the development of computer software shall not be taken to be systematic, investigative and experimental activities unless the computer software is developed for the purpose, or for purposes that include the purpose, of sale, rent, licence, hire or lease to 2 or more non-associates of the company (counting a non-associate of the company and the associates of such a non-associate together as one person)."¹⁵⁸

Therefore, where software development comprises the systematic, investigative and experimental activities of a project, the taxpayer must be able to demonstrate that it meets the "multiple sale" requirement in order to qualify for the R&D tax concession.¹⁵⁹ The development of computer software for 'management and internal business processes' will therefore qualify for the R&D tax concession provided that the taxpayer meets the "multiple sale" requirement. In other words, the development of software for in-house management and internal business processes will therefore not qualify for the concession.

However, during September 2009 the Treasury Department of the Australian Government released a Consultation Paper in which it presented a case for a reform

¹⁵⁷ Subsection 73B(2A) of the ITAA 1936.

¹⁵⁸ Subsection 73B(2A) of the ITAA 1936.

¹⁵⁹ The Australian Taxation Office (ATO) in joint concession with AusIndustry released a guide on the R&D Tax Concession of Australia in order to assist taxpayers in identifying possible claims. According to this guide the ATO also accepts that the multiple sale test is met where the software is sold or licensed to a separate entity whose intention is multiple sale. (Australian Taxation Office *The R&D Guide on the R&D Tax Concession* Version 4.3 (2010)).

of the R&D tax incentive as it then was. The paper invited stakeholders to suggest alternative approaches to the current treatment of software as part of the new R&D tax incentive and also contained the following comments in this regard:

“To be eligible for the current R&D tax concession, software activities need to meet a multiple sales test in addition to meeting the normal definition of eligible R&D activity. The multiple sales test was intended to limit government assistance for software R&D to claims where a firm sold the software that was produced, effectively excluding support for in-house software development.

However, it is important to note that when the multiple sales provisions were put into place some 30 years ago, the extent of development of e-commerce was not fully appreciated. The Government now considers that the current multiple sales test has become an outdated articulation of policy intent as it relates to software.”¹⁶⁰

BDO Kendalls (Australia) Ltd, Australia’s fifth largest Audit firm, made the following submission to Treasury in reply to the above Treasury Consultation Paper:

“While the use of computers and software in the late 1980’s and early 1990’s was confined to relatively small segments of the community, ...the computer has now become a ubiquitous part of business life. Indeed, failing to use computers to at least a small degree to provide a conduit to potential customers and to manage the affairs of the business poses the potential to lead to the rapid demise of a business. Computers and software have now become an essential part of business competitiveness, efficiency and performance.

Advancements in computer software are occurring at an exponential rate. Hand-in-hand with this advancement is the increasing complexities and risks associated with the use and development of software. Identity fraud and general software security, particularly in the online environment, are presenting ever increasing commercial threats. In order to ensure consumer confidence and reduce the ongoing costs associated with software security issues, continued R&D in the software engineering field is essential.

The question must then be asked, why should R&D involving the development of software be subject to specific eligibility rules? Consider a manufacturer that develops a physical asset that will be used by the manufacturer to produce goods which are sold to consumers. The asset is not licensed or sold to consumers and will only provide direct benefits to the company. Technological advancements and IP developed during the

¹⁶⁰ Australian Government (Treasury Department) *The New Research and Development Tax Incentive – Consultation Paper* (2009).

development of the asset will, no doubt, be closely protected and guarded, limiting any direct flow on to consumers. The commercial exploitation of the asset will be limited to the production of goods....

To ensure productive advancements in software engineering and development continues, access to the R&D tax concession for software development should be on a level playing field with all other eligible R&D activities and not subject to archaic and now arbitrary restrictions such as the multiple sale criteria.”¹⁶¹

On 31 March 2010, the Australian Government released revised exposure draft legislation for the new R&D tax concession. According to the revised exposure draft the “multiple sales” test for software R&D was removed from the Act effective 1 July 2010. Most software R&D would therefore be subject to the same rules as all other kinds of R&D. However, certain in-house software activities will be excluded from core R&D and will therefore be subject to the dominant purpose test for supporting R&D. The dominant purpose test pertains to supporting R&D activities and it determines that supporting R&D activities will be eligible for the R&D tax concession provided that it is directly related to an eligible core R&D activity.

6.4.1.3. Comparison with SA legislation

By removing the “multiple sales” test from the R&D tax legislation, the Australian Government acknowledged the fact that the test had become archaic in a business environment driven by computers and information technology. The R&D tax concession of Australia had fallen behind the global trend in R&D tax incentive practices and the Government of Australia realised that in order to ensure that Australia remains an attractive R&D prospective; the R&D concession had to be amended in order to be more attractive for potential investors. As a result hereof, the development of software for in-house use is now eligible for the R&D tax concession provided that it meets the other criteria for eligibility.

Therefore, under the new R&D tax regime in Australia, software developed for ‘management or internal business processes’ is eligible for the Australian R&D tax concession irrespective of whether the software is developed for in-house use or for

¹⁶¹ BDO Kendalls (Australia) Ltd *Submission – The New Research and Development Tax Incentive* (2009).

the purpose of sale or licensing. Under the previous regime, such software would only be eligible if it satisfied the 'multiple sales' test.

However, under South African legislation, software (i.e. computer programs) developed for 'management or internal business processes' do not qualify as an eligible R&D activity. According to SARS' interpretation of the exclusion provision, the exclusion extends to the development of such computer programs even if the purpose of such development is sale or licensing to unrelated third parties. In no event would computer programs relating to 'management or internal business processes' be eligible for the section 11D tax incentive if SARS' interpretation is to be enforced.

SARS' interpretation places South African programmers at an obvious disadvantage compared to programmers in Australia - a result in gross conflict with the goal sought by the South African Treasury.

6.4.2. United Kingdom

6.4.2.1. *Eligible R&D activities*

R&D is defined in section 837A¹⁶² as following generally accepted accounting practice. Furthermore, the section provides that the Treasury may issue regulations that modify this definition for tax purposes. The regulations which have been made refer to guidelines by the Secretary of State and are generally referred to as the DTI Guidelines (or, now, the BIS guidelines).¹⁶³

Essentially, any activities which directly contribute to a project undertaken to achieve an advance in science and technology through the resolution of a scientific or technological uncertainty are R&D activities for tax purposes. Certain qualifying

¹⁶² Refer Part XIX of the Income and Corporation Taxes Act 1988.

¹⁶³ Her Majesty's Revenue & Customs *CIRD81300 – R&D Tax Relief: Conditions To Be Satisfied: The Definition of R&D for Tax Purposes* (2009).

indirect activities related to the project are also eligible for the R&D tax concession.¹⁶⁴

The arts, humanities and social sciences (including economics) are generally excluded from being eligible R&D activities for tax purposes.¹⁶⁵ The UK does not contain an exclusion similar to the 'management or internal business process' exclusion contained in South African R&D tax legislation.

6.4.2.2. DTI guidelines as applicable to software

The Secretary of State issued Circular CIR81960¹⁶⁶ on the conditions to be satisfied in order to qualify for R&D tax relief as specifically applying to software development. The circular provides that expenditure on the creation of software can be R&D within the DTI guidelines in two ways, i.e.:

- Software that is used as a tool in a larger R&D project;¹⁶⁷ or
- The development of the software must be the goal of the R&D project.

Where software is developed as a tool for direct use in a larger R&D project, the development of the software will qualify as R&D irrespective of whether it involves a specific advance in science or technology. It is merely required that the larger R&D project qualify as an eligible R&D activity.¹⁶⁸

Where the development of the software is the goal of the R&D project, i.e. it does not serve as mere supporting activity, the following requirements must be adhered to in order for the software development to be eligible:

- the project must seek to achieve an advance in science or technology;
- the activities must directly contribute to achieving the advance through the resolution of a scientific or technological uncertainty; and

¹⁶⁴ Her Majesty's Revenue & Customs *CIRD81900 – R&D Tax Relief: Conditions To Be Satisfied: DTI Guidelines (2004) (2009)*.

¹⁶⁵ Her Majesty's Revenue & Customs *CIRD81960 – R&D Tax Relief: Conditions To Be Satisfied: DTI Guidelines (2004): Application to Software (2009)*.

¹⁶⁶ Her Majesty's Revenue & Customs *CIRD81960*.

¹⁶⁷ The development of the software serves as a supporting activity to the R&D project.

¹⁶⁸ Her Majesty's Revenue & Customs *CIRD81960*.

- there must be an advance in overall knowledge or capability in a field of science or technology, not just the company's own state of knowledge or capability alone.¹⁶⁹

The development of software will be eligible whether it is intended for in-house use, sale or licensing provided that the above mentioned requirements are met.¹⁷⁰

6.4.2.3. Comparison with SA legislation

The development of software for 'management or internal business processes' will be eligible for the R&D tax credit in terms of the UK R&D tax legislation.

However, as mentioned above, South African legislation prohibits software (i.e. computer programs) developed for 'management and internal business processes' from qualifying as an eligible R&D activity. SARS interprets this exclusion to extend to the development of such computer programs even if the purpose of such development is sale or licensing to unrelated third parties. In no event would computer programs relating to 'management or internal business processes' be eligible for the section 11D tax incentive according to SARS.

Again the interpretation of SARS will place South African programmers at a severe disadvantage when compared with UK programmers.

6.4.3. Canada

6.4.3.1. Eligible R&D activities

Section 248¹⁷¹ defines scientific research and development (SR&ED) to mean:

"systematic investigation or research that is carried out in a field of science or technology by means of experiment or analysis that is

- (a) basic research, namely work undertaken for the advancement of scientific knowledge without a specific practical application in view,

¹⁶⁹ Her Majesty's Revenue & Customs *CIRD81960*.

¹⁷⁰ Her Majesty's Revenue & Customs *CIRD81960*.

¹⁷¹ Refer Part XVII of the Canadian Income Tax Act (R.S.C., 1985, c. 1 (5th Supp.)).

- (b) applied research, namely work undertaken for the advancement of scientific knowledge with a specific practical application in view, or
- (c) experimental development, namely work undertaken for the purpose of achieving technological advancement for the purpose of creating new, or improving existing, materials, devices, products or processes, including incremental improvements thereto,

and, in applying this definition in respect of a taxpayer, includes

- (d) work undertaken by or on behalf of the taxpayer with respect to engineering, design, operations research, mathematical analysis, computer programming, data collection, testing or psychological research, where the work is commensurate with the needs, and directly in support, of work described in paragraph (a), (b), or (c) that is undertaken in Canada by or on behalf of the taxpayer...”

Canada does not contain an exclusion similar to the ‘management or internal business process’ exclusion contained in South African R&D tax legislation.

6.4.3.2. *Eligibility of software development*

The Canadian Revenue Agency issued R&D guidelines¹⁷² for the eligibility of software development. According to these guidelines the development of software must satisfy the following three criteria in order for the project to be considered SR&ED:

- The project must seek to effect an advance in computer science or information technology;
- The above advance must be made by solving a scientific or technological uncertainty in software development which is not readily apparent to appropriately skilled and experienced software developers; and
- The project must demonstrate a systematic investigation or search by experiment or analysis.

Provided the above requirements are met, the development of computer software for ‘management or internal business processes’ will be eligible for the R&D tax credit

¹⁷² Canadian Revenue Agency *IC97-1: Scientific Research and Experimental Development – Administrative Guidelines for Software Development* (2003).

irrespective of whether the software was developed for in-house use, sale or licensing.

6.4.3.3. Comparison with SA legislation

As the case with the comparison to the Australian and the UK legislation above, the South African programmers are in an unfavourable position concerning R&D tax incentives when compared with their Canadian colleagues.

6.5. Conclusion

The business environment has undergone immense transformation over the last 20 years and is now predominantly ruled by computer science and information technology. In order to stay competitive in this global arena it is imperative that countries stay abreast of development in the fields of science and technology especially pertaining to information technology. Countries who consider themselves pioneers in R&D tax incentives have acknowledged this need and have consequently amended their R&D tax legislation to provide greater incentives in the field of software development. A recent example hereof is the removal by the Australian Government of the ‘multiple sale’ test as eligibility criteria for software development.

South Africa has only recently upped the ante regarding the provision of tax incentives for research and development carried out in South Africa. The intention of Treasury with the introduction of section 11D was to ensure that local R&D is not at a global competitive disadvantage. However, as shown above, the interpretation suggested by SARS in Interpretation 50 regarding the development of computer programs places South Africa at a great disadvantage when compared with the R&D tax legislation of countries such as Australia, the UK and Canada.

SARS is of the view that the ‘management and internal business processes’ exclusion applies to any computer program developed with this application irrespective of whether the program is developed for the purpose of in-house use, sale or licensing. However other stakeholders are of the opinion that such a view is at odds with global practice (as was shown above) and that the exclusion should enjoy a much wider interpretation:

“This narrow interpretation by SARS conflicts with global practice, more relevant to *bona fide* 3rd party developers, being that systems developed for multiple sales i.e. software development for purposes of ‘sale, rent, licence, hire or lease of two or more non associates of the company’ with sufficient documentary evidence of these multiple sales, would render expenditure for development of the system deductible. However, as SARS correctly points out, no ‘multiple sales’ test is included in our legislation. Therefore, were a taxpayer do develop software for multiple sales, that taxpayer would still need to meet the other requirements of s 11D, such as the scientific & technological requirement and the exclusions under s 11D(5), before associated expenditure will be deductible. Multiple sales is a factor our Courts may well take into consideration when examining computer programs, but it is not a specific allowable deduction in our legislation.”¹⁷³

SARS correctly points out that section 11D does not contain a specific ‘multiple sales’ requirement, however, when one attempts to interpret the said exclusion, i.e. ‘management or internal business processes’ as applied to the eligibility of computer program development, the intention of the lawgiver should be given effect to. Treasury introduced section 11D into our Act to ensure that South Africa is not at a global disadvantage concerning R&D. Therefore, an interpretation increasing the ambit of eligibility for computer program development is well-advised.

It is submitted that the exclusion should be construed to pertain solely to computer programs developed for in-house use relating to management and internal business processes. Computer programs which are developed to be used by the taxpayer for administration, human resource or accounting purposes will therefore not qualify for the R&D tax incentive.

However, computer programs developed by the taxpayer for ‘management and internal business processes’ applications with the intention of selling or licensing the programs to unrelated third parties, should qualify as eligible R&D activities.

It is submitted that such an interpretation will promote the goal sought to be achieved by Treasury as it will place South African programmers on a more level playing field when compared with computer programmers in Australia, the UK and Canada.

¹⁷³ Price *An Analysis of the South African Tax Incentive for Research and Development and an International Comparison* University of Kwazulu-Natal (2010) 26.

CHAPTER 7

Conclusion

Section 11B of the Income Tax Act was introduced during 2006 and passed into law in February 2007. From the numerous amendments made to this section since its introduction into law, it is evident that the section is in the process of maturing from its adolescent state of flux.

SARS spent three years on the finalisation of its interpretation of the section. This serves as proof of the complex and highly technical nature of the incentive. The resultant Interpretation Note 50 issued in 2009 sparked wide-spread controversy among many patent attorneys and tax consultants. Of particular heartache to the taxpayers is the construction SARS has placed on the concepts of “novelty” and “obviousness” as well as the narrow interpretation awarded to the “management or internal business process” exclusion as specifically applied to the development of computer programs.

The purpose of this dissertation was to provide greater clarity on the above mentioned “grey areas” of the R&D tax incentive.

As no tax jurisprudence was available on the R&D tax incentive at the time of this dissertation, the study had to be governed by established principles of statutory interpretation.

Chapter 2 found that it was trite law to seek and give effect to the intention of the legislature in construing any provision of a statute before the ordinary meaning is awarded thereto. According to the Explanatory Memorandum issued on the proposed enactment of section 11D the intention with the new incentive was to stimulate R&D activities of a scientific and technological nature which would result in new knowledge and not represent mere routine learning activities as part of an ongoing process. It is clear from this description that Treasury’s aim was to incentivise only those R&D activities that would result in a scientific and technological advance in the relevant field. The aim of this study was therefore to award a construction to the so-called “grey areas” which would give effect to the evident aim of the legislature.

The first “grey area” pertains to the meaning and scope of the “discovery of new, practical and non-obvious information” as one of the eligible R&D activities listed in the Income Tax Act. As “novelty” and “obviousness” lie at the heart of patent law, a number of IP jurisprudence exists on the meaning of the above concepts in terms of Patent Law.

Chapter 2 investigated whether the meaning of “new” and “non-obvious” could be interpreted for tax purposes by having recourse to the abundance of IP jurisprudence on the matter. It was concluded that such a reference to IP jurisprudence is justified as section 11D itself makes reference to, and relies on, the terms as defined in the Patents Act. Furthermore, it was stated by Sibanda & Zantwijk (consultants to Treasury on this section) that one of the motivations for the insertion of section 11D(1)(a)¹⁷⁴ into the Income Tax Act was the fact that the Patents Act denies “discoveries” the status of an invention. Thus, it is submitted that the intention of the legislature was to award discoveries the opportunity to qualify for the R&D tax incentive allowance. Discoveries are not regularised and seeing as the requirements set for discoveries by the R&D tax incentive reflects the patent requirements set for inventions by the Patents Act, Chapter 2 found it just to consult IP jurisprudence on the meaning of “new” and “non-obvious”.

Hence chapter 3 set forth with an investigation into the meaning of “novel” as applied to patentable inventions in terms of Patent law. The chapter concluded that an invention is regarded as novel if it did not form part of the *state of the art* immediately prior to the date of its invention. The *state of the art* was found to comprise all matter which had been made available to the public by written or oral description, by use or in any other way. Prior art is regarded as being available to the public if it is possible for members of the public to gain knowledge of the content without any bar of confidentiality restricting the use or dissemination of such knowledge.

Chapter 3 outlined that prior art will describe the invention under challenge if it sets forth in words or recites the essential integers of the invention in such a way that the same or substantially the same invention is identifiable or perceptible and hence made known, or the same or substantially the same thing can be made from that

¹⁷⁴ i.e. the “discovery of new, practical and non-obvious information” as eligible R&D activity.

description. It was found that if the publication fails to recite a single integer, the prior publication cannot be said to describe the invention claimed to be novel. Chapter 3 also found that the prior publication must be contained in a single publication and should be construed on the date of its publication to the exclusion of information subsequently discovered. It was concluded that an invention will pass the novelty requirement if, upon comparison with the prior art, it shows a real difference with such art.

Chapter 4 studied the meaning of “non-obvious” as applied to patentable inventions in terms of Patent Law. The test formulated by our courts to test for obviousness is whether an ordinary person skilled in the art would have easily solved the problem faced by the inventor by using his intelligence and having regard to what was common knowledge in the art at the time. Common knowledge refers to the working knowledge possessed by the ordinary worker. It does not encompass all published knowledge or prior art. The ordinary worker may however, in his quest to solve the problem presented to him, have recourse to prior art, but it is presumed that reliance on his common knowledge alone would have easily led him to find the answer sought.

In assessing obviousness, the courts have made it clear that the only real question to be asked is whether the step taken was an obvious one. Secondary factors such as a significant advance in the field, the production of a practical result or the achievement of commercial success may only serve to lessen the burden of proof, but it does not in itself prove that the invention claimed is non-obvious in nature.

As mentioned above, the R&D tax incentive deals with a “discovery” of information, whereas the Patents Act only pertains to “inventions”. Discoveries are denied the status of an invention in terms of the Patents Act. Chapter 5 therefore investigated whether the meanings of “new” and “non-obvious”, as laid out by IP jurisprudence, could *vis-à-vis* be adopted for purposes of section 11D.

Chapter 5 commenced with a study of the ordinary dictionary meaning of a “discovery” and an “invention”. The ordinary meaning of a “discovery” involves the act of being the first to find something which existed before, whereas an “invention” results in the creation of something which did not exist before.

It was however concluded that the difference in nature between a “discovery” and an “invention” does not hinder the adoption of the meaning of “novel” and “non-obvious” for purposes of the R&D tax incentive. This is due to the fact that a discovery, like an invention, will be regarded as “new” if it did not form part of the *state of the art* prior to the discovery thereof. The thing discovered will have existed prior to the discovery thereof, but as it did not form part of the public domain prior to the discovery thereof, the discoverer will have been the first to find such thing. Likewise, the difference in nature between a discovery and an invention was found to have no influence on the meaning of “non-obvious”. The meaning of “non-obvious” can be applied to a discovery without any difficulty.

Chapter 5 also studied the ordinary meaning of the words “novel” and “non-obvious”. Something is novel if it is strikingly new or unusual. The ordinary meaning of “novel” has the effect that the discovery of information which formed part of the public domain prior to the discovery thereof will still qualify for the tax incentive provided that it was not commonly encountered or observed in the public domain. Something is non-obvious if it is not easily perceived or understood by the ordinary man. The ordinary meaning of non-obvious has the effect that the discovery of information which is obvious to a person skilled in the art will still qualify for the tax incentive provided that the information discovered is not obvious to the ordinary man.

Chapter 5 concluded with the submission that the adoption of the ordinary meaning of “novel” and “non-obvious” will result in section 11D(1)(a) having an ambit which is far greater than the legislature intended it to be. The intention of the legislature was to stimulate R&D activity that would lead to an advance in the fields of science and technology and not merely encompass routine activities as part of an ongoing process. By adopting the ordinary meaning of the above concepts the goal sought by Treasury would not be achieved, as the taxpayer would merely opt for routine R&D activities in order to qualify for the incentive rather than performing complex R&D activities.

Thus, in order to give effect to the intention of the legislature, it was found that “novel” and “non-obvious” should *mutatis mutandis* adopt the meaning awarded to it by IP legislation.

Chapter 6 dealt with the second “grey issue” of the new incentive, i.e. the development of computer programs read with the “management and internal business process” exclusion found in section 11D(5)(b). The wide-spread controversy surrounding this contentious issue resulted from the release of SARS’ Interpretation note in August 2009. SARS is of the view that the ‘management or internal business process’ exclusion applies to the development of any computer program with this application irrespective of whether the program is developed for the purpose of in-house use, sale or licensing. However, other stakeholders are of the opinion that such a view is at odds with global practice and that the exclusion should enjoy a much wider interpretation.

As per the Explanatory Memorandum issued by Treasury on the introduction of section 11D, the intention with the introduction of this section was to ensure that South Africa is not at a global disadvantage concerning R&D. Chapter 6 therefore aimed to place a construction on the said exclusion that would aid in achieving the goal sought by Treasury.

As a result hereof, international R&D provisions relating to computer (or software) development were consulted. Specifically the R&D tax credit provisions of Australia, the UK and Canada were studied as these countries profess to be pioneers in the field of R&D tax legislation. It was found that, in terms of the current R&D tax legislation of all three countries, the development of computer programs would be eligible for the R&D tax incentive provided that an advance in the field of science and technology is achieved by way of systematic, investigative and experimental activities, and that such an advance was achieved by solving a scientific or technological uncertainty which was not readily apparent to an appropriately skilled software developer.

From the above it is clear that South African computer programmers are grossly disadvantaged by the interpretation of SARS which was proven to be at odds with global practice. SARS correctly points out that section 11D does not contain a specific “multiple sales requirement”, however the counter argument is that such a provision is not required if a wide interpretation of the said exclusion is to be adopted. In other words, if the exclusion is to be interpreted to only exclude computer programs developed for in-house management or internal business

process use, then the inclusion of a “multiple sales requirement” in the Income Tax Act would be redundant.

Chapter 6 concluded with a submission that the exclusion should be construed to exclude only the development of computer programs for in-house management or business process use. Therefore, the development of computer programs with this application, but for the purpose of intended sale or licensing, should not fall within the ambit of the exclusion. It is submitted that such an interpretation will be in harmony with the intention of the lawgiver and will achieve the goal sought by Treasury.

Herma Keshav, in his article “How SA’s R&D tax incentive stacks up against the US’s”.¹⁷⁵ noted that according to a report dated September 2006, by Dr Robert D Atkinson of the International Technology and Innovation Foundation, the United States provided the most generous tax treatment of R&D in the late 1980s and early 1990s among OECD nations. By 2004 they had fallen to the 17th most generous regime. This is due to the fact that many countries, over the years, have improved their R&D tax incentive schemes. It is evident that the United States did not keep up the pace.

In a global R&D arena that is ever competitive and aware of the value of a generous R&D tax incentive, the interpretation placed on section 11D by our Courts will be crucial. An interpretation that is too restrictive in nature will result in South Africa driving a backseat to countries such as Australia, the UK and Canada.

This study concludes with the following:

“If we are to keep pace in the R&D race, the learning we in SA can take from the US R&D experience is that we must keep track of both the impact of the R&D tax incentive on the country’s R&D spend – and also compare its growth in R&D on an international scale”.¹⁷⁶

¹⁷⁵ Keshav “How SA’s R&D Tax Incentive Stacks Up Against the US’s” 2008 *Moneyweb Tax*.

¹⁷⁶ Keshav “How SA’s R&D Tax Incentive Stacks Up Against the US’s” 2008 *Moneyweb Tax*.

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