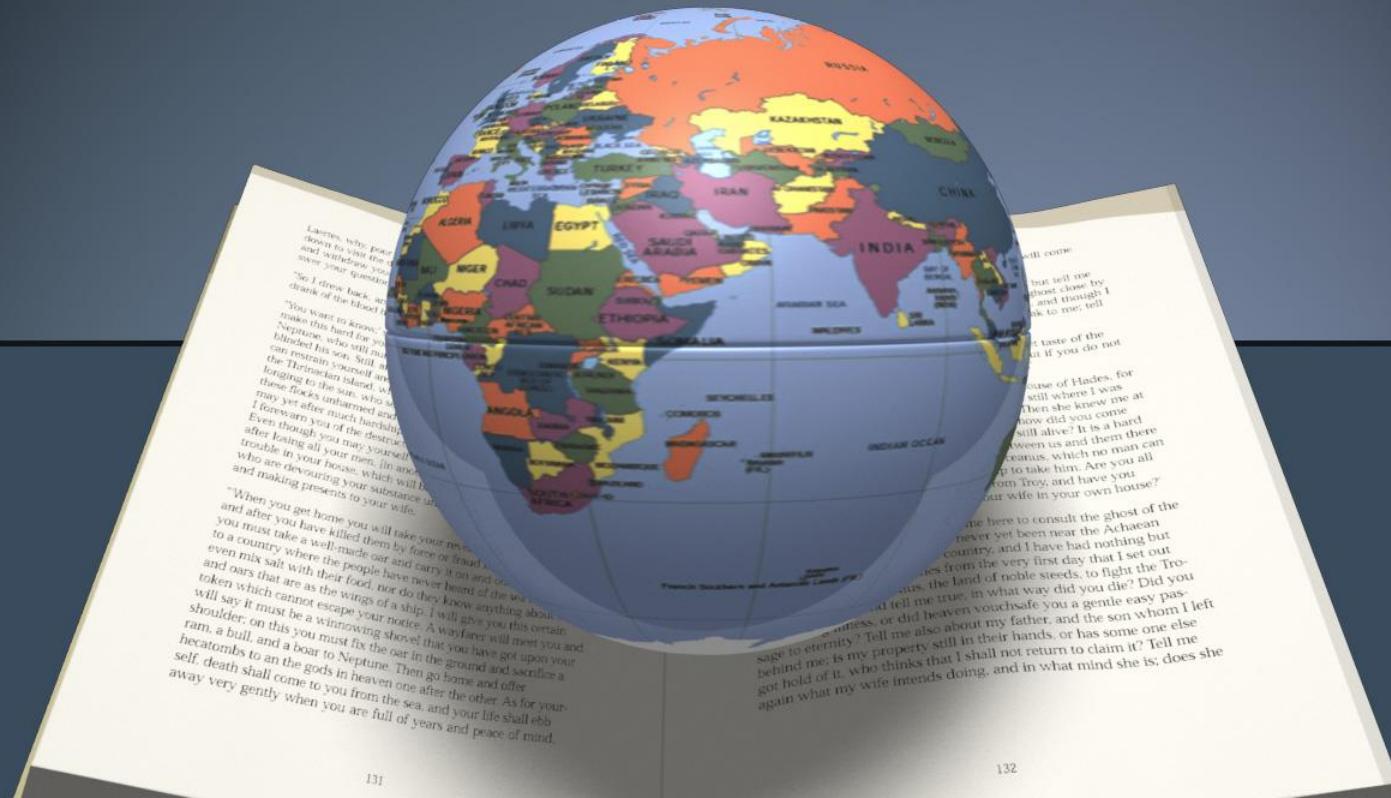


# IT1218/IT1769 LAW & ETHICS OF IT

## Lecture 10 : Patents Act



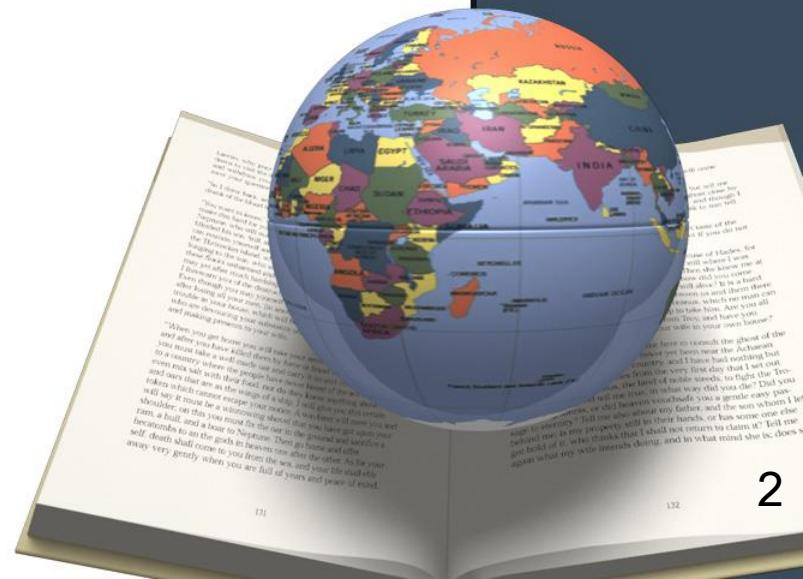
# 10. PATENTS ACT

## Overview

- An introduction to Patents Act
- An understanding of legal issues relating to Patents

## Outline

- 10.1 What is an invention?
- 10.2 Novelty of an invention
- 10.3 Inventive Step/Obviousness

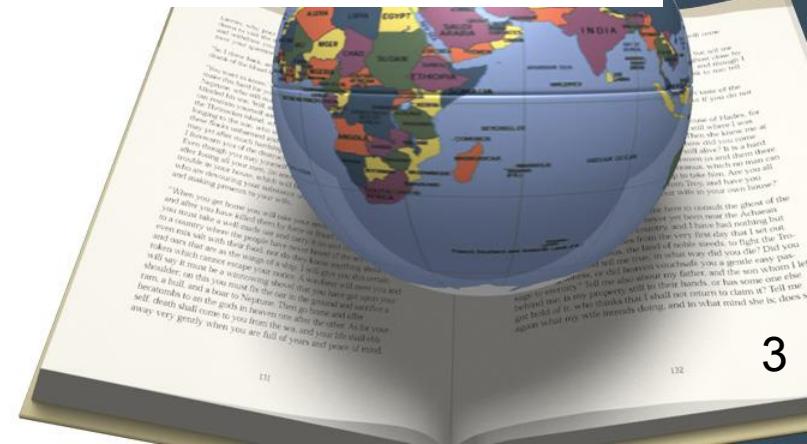


# 10. PATENTS ACT

Inventions, patents and “patentable subject matter”:  
What is an invention?

a) Historical term: Any manner of new manufacture.

Section 6 of the Statute of Monopolies 1624 declared all monopolies, dispensations and grants to be void, except: "any letters patent and grants of privilege for the term of 14 years or under, hereafter to be made, of the sole working or making of any manner of new manufactures within this realm, to the true and first inventor of such manufactures which others at the time of making such letters patent and grants shall not use."



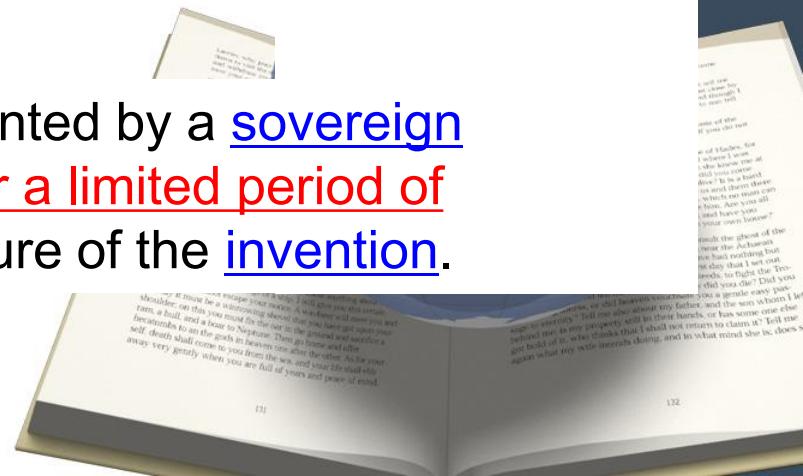
# What is an invention?

An invention is **a solution** to a specific technological problem, and may be **a product** or a process.



# What is a patent?

A **patent** is a set of exclusive rights granted by a sovereign state to an inventor or their assignee for a limited period of time, in exchange for the public disclosure of the invention.

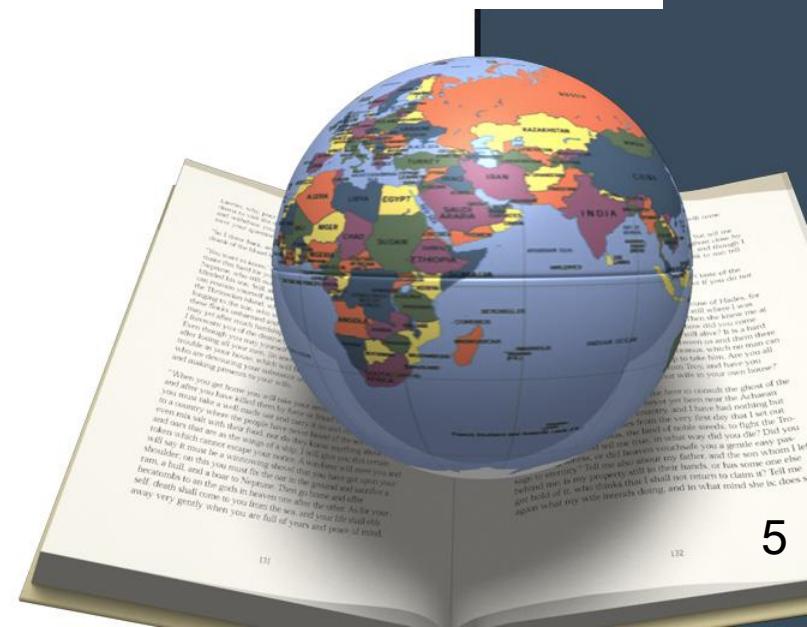


# 10. PATENTS ACT

Inventions, patents and “patentable subject matter”:  
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Paris Convention Art.1(3): “Industrial property shall be understood in the broadest sense and shall apply not only to industry and commerce proper, but ... to agricultural and extractive industries and to all manufactured or natural products...”

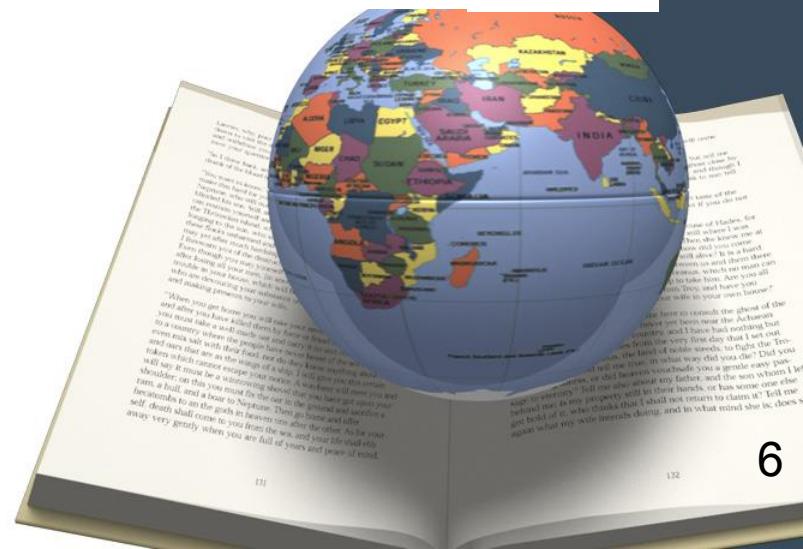


# 10. PATENTS ACT

Inventions, patents and “patentable subject matter”:  
What is an invention?

- a) Historical term: Any manner of new manufacture.

UK Patents Act 1949 s.101: “Invention” means any manner of new manufacture the subject of letters patent and grant of privilege with s.6 of the Statute of Monopolies and any new method or process of testing applicable to the improvement or control of manufacture, and includes an alleged invention”

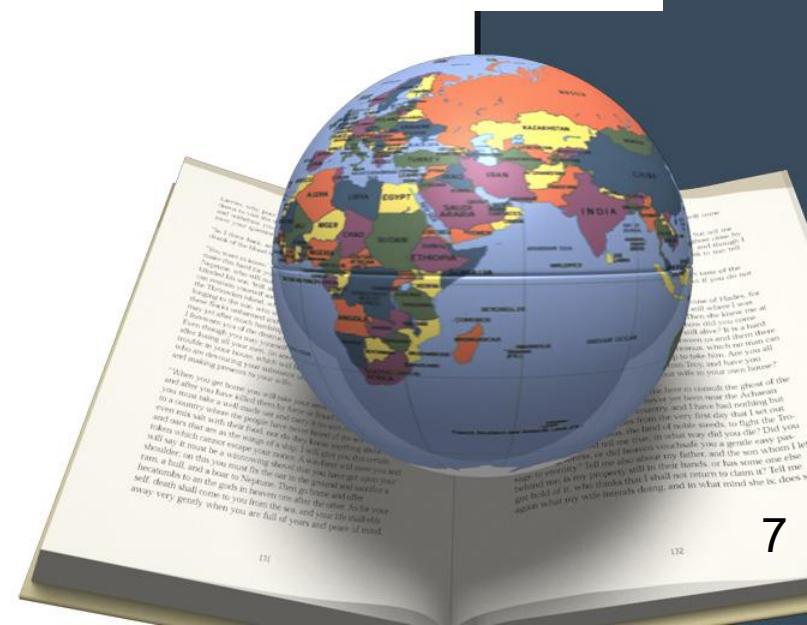


# 10. PATENTS ACT

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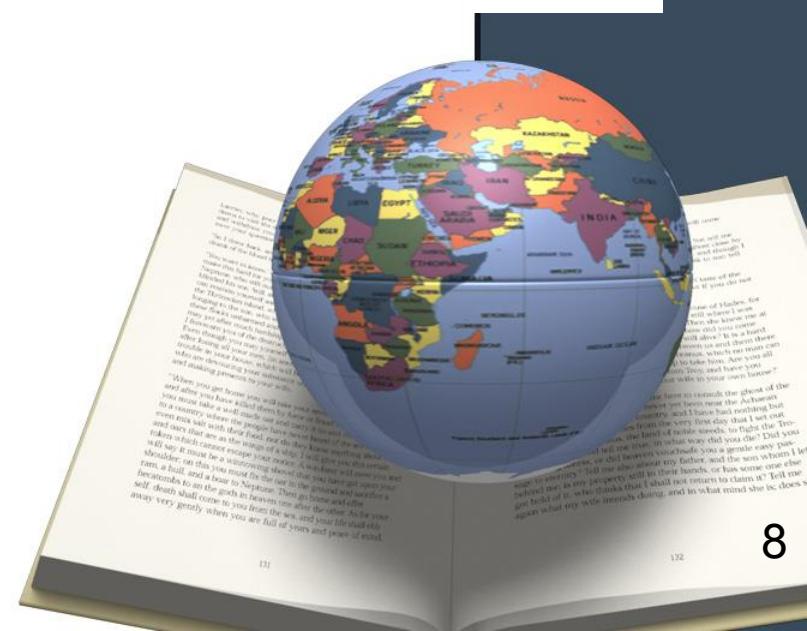


# 10. PATENTS ACT

What constitutes to a patentable “invention” in modern legislation?

US Law:

In 35 U.S.C. § 101: Whoever invents or discovers **any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement** thereof, *may obtain a patent therefor*, subject to the conditions and requirements of this title.

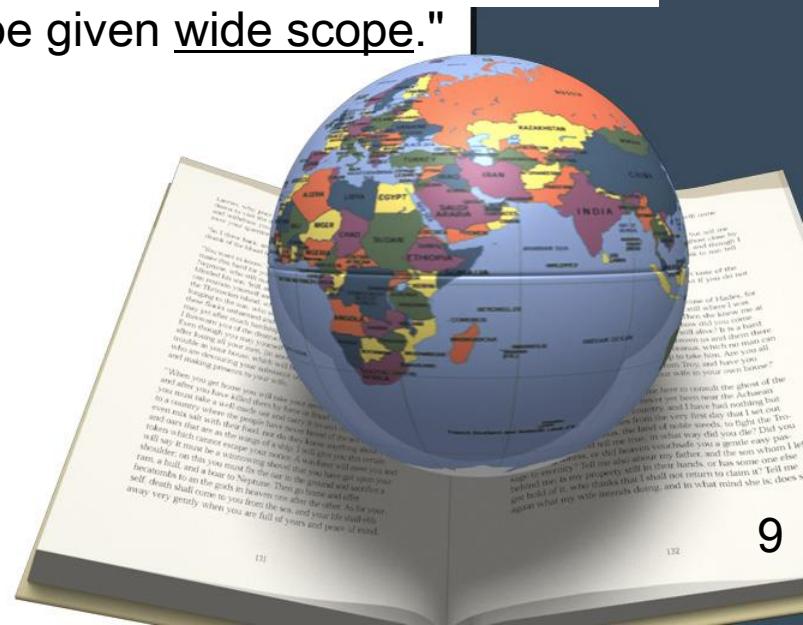


# 10. PATENTS ACT

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US Law:

In the Supreme Court in Diamond v. Chakrabarty, the Court explained that the patent system is directed to the inventive works of mankind, and is not otherwise limited: "In choosing such expansive terms as 'manufacture' and 'composition of matter,' modified by the comprehensive 'any,' Congress plainly contemplated that the patent laws would be given wide scope."

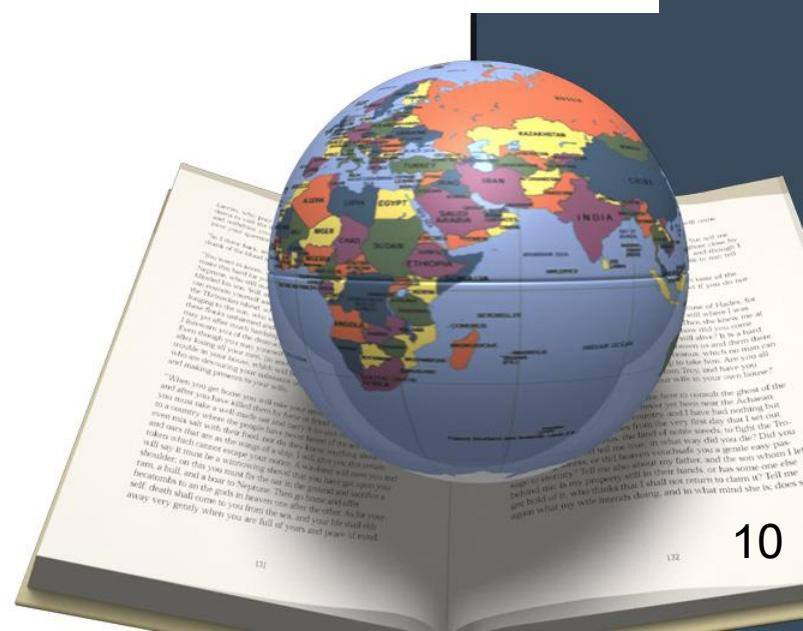


# 10. PATENTS ACT

What constitutes to a patentable “invention” in modern legislation?

TRIPS Art.27(1):

“[P]atents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. ...”



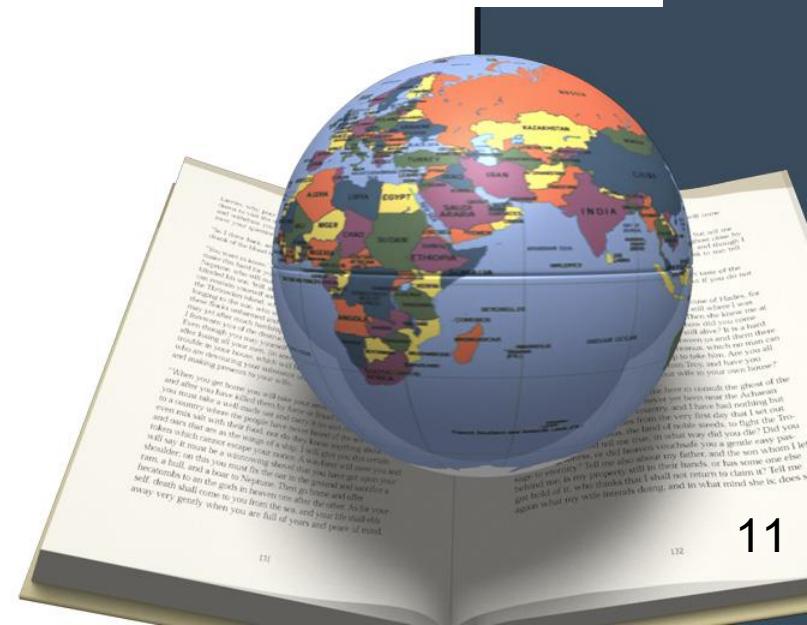
# 10. PATENTS ACT

What constitutes to a patentable “invention” in modern legislation?

(UK) Patents Act 77 s.1:

"1(1) A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say –

- (a) the invention is new;
- (b) it involves an inventive step;
- (c) it is capable of industrial application;



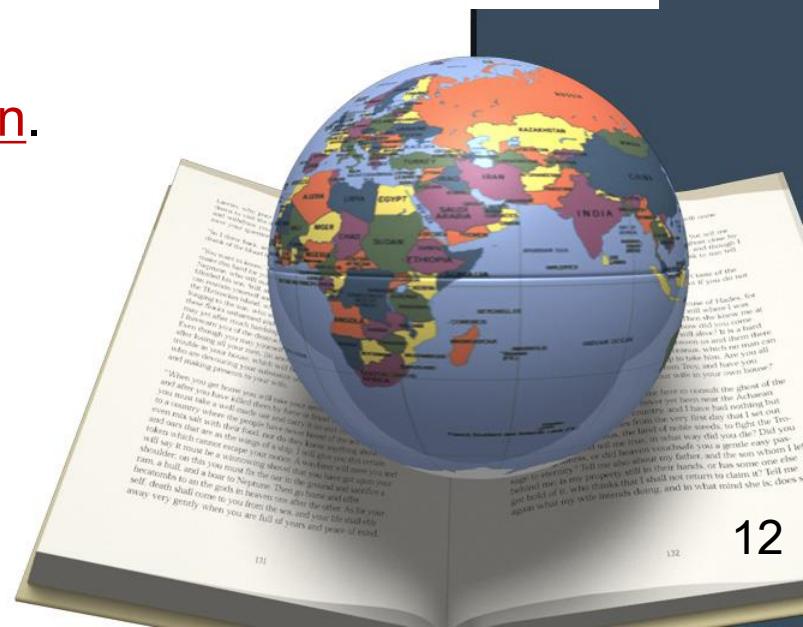
# 10. PATENTS ACT

What constitutes to a patentable “invention” in modern legislation?

## SINGAPORE'S POSITION:

S13(1) defines a 'patentable invention' as one that satisfies the following conditions:

- (a) the invention is new;
- (b) it involves an inventive step; and
- (c) it is capable of industrial application.



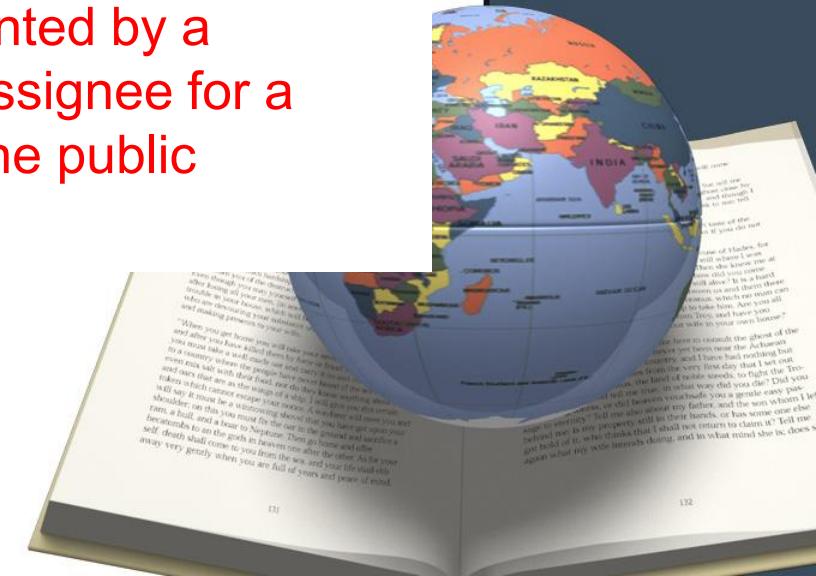
# What is an invention?

An invention is *a solution to a specific technological problem*, and may be a product or a process.



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A patent is a set of exclusive rights granted by a sovereign state to an inventor or their assignee for a limited period of time, in exchange for the public disclosure of the invention.



# 10. PATENTS ACT

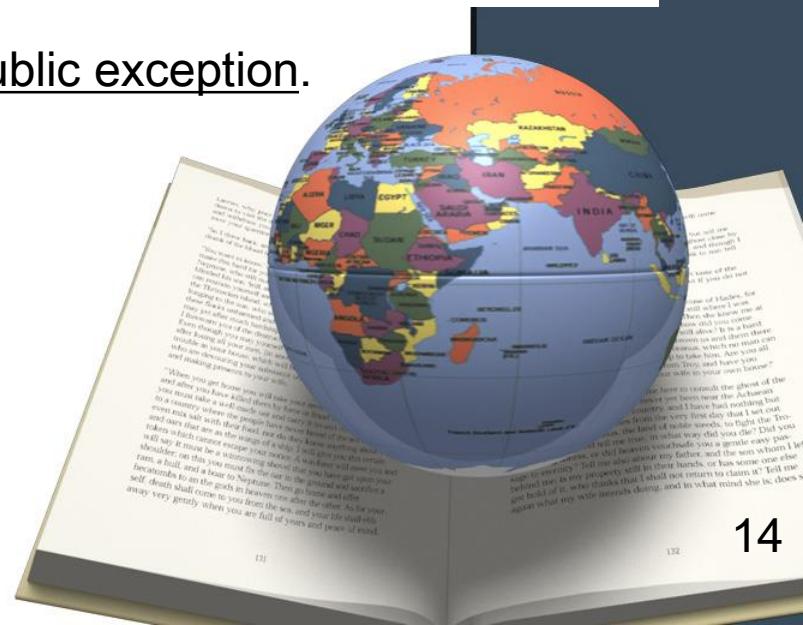
What constitutes to a patentable “invention” in modern legislation?

## SINGAPORE'S POSITION:

There is a 'negative' criterion,

s13(2) provides that an invention the publication or exploitation of which would be generally expected to encourage offensive, immoral or anti-social behaviour is not a patentable invention.

This is sometimes known as the ordure public exception.



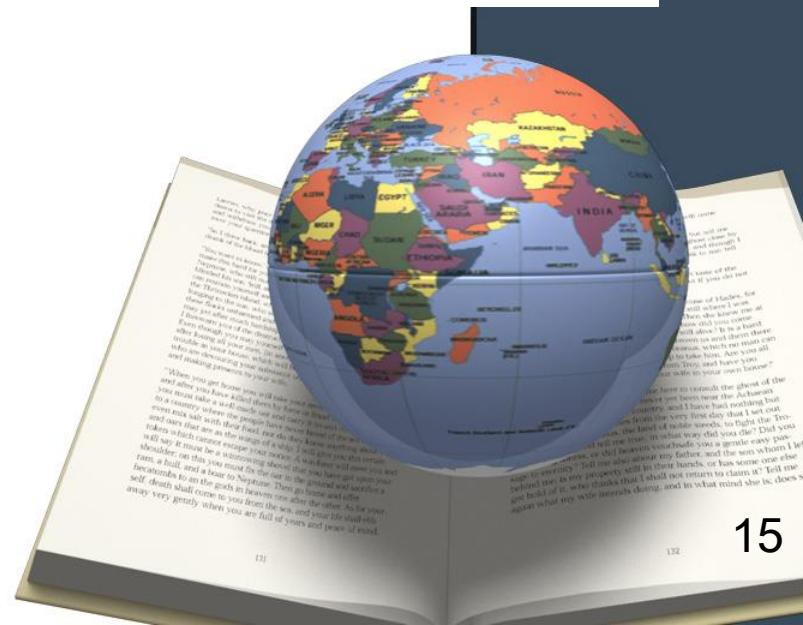
# 10. PATENTS ACT

What constitutes to a patentable “invention” in modern legislation?

## SINGAPORE'S POSITION:

There is possibly a fourth criterion.

Within s13(1)(a), in the sentence 'the invention is new', it could be argued that there are two' separate requirements: there must be an 'invention', and it must be 'new'.



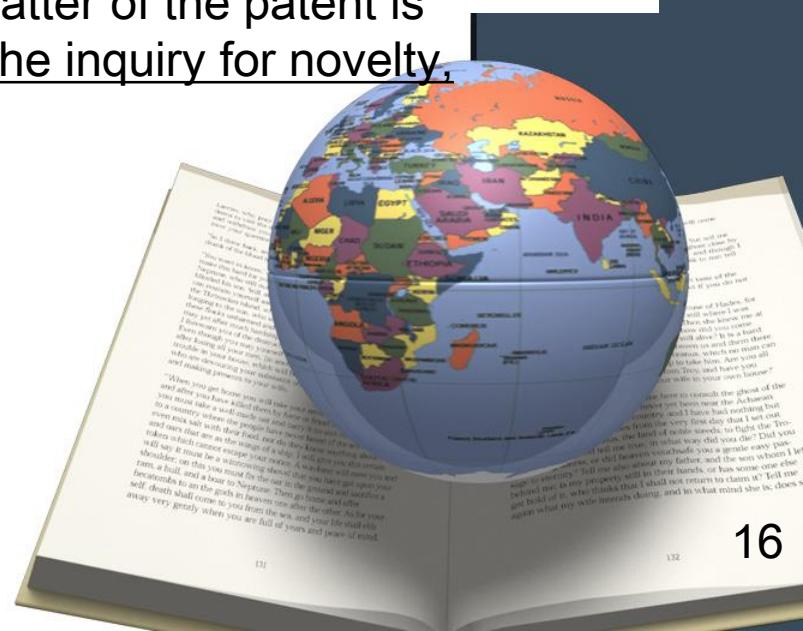
# 10. PATENTS ACT

What constitutes to a patentable “invention” in modern legislation?

## SINGAPORE'S POSITION:

Discoveries of things that exist in nature, the laws of nature, physical phenomena and abstract ideas are not inventions and, therefore, these are still not patentable in Singapore.

The assessment of whether the subject-matter of the patent is or is not an invention is subsumed within the inquiry for novelty, inventive step and industrial application.



## 10. PATENTS ACT

Intellectual property (IP) has different forms; in the case of access to medicines, we are talking about **patents**. **Patents** are a public policy instrument aimed at stimulating innovation. By providing a monopoly through a **patent**—which gives inventors an economic advantage—**governments** seek to provide an incentive for R&D.



Nurse dispensing medicines in the Chelebiler village health post in Azerbaijan. Photo: Kieran Doherty / Oxfam

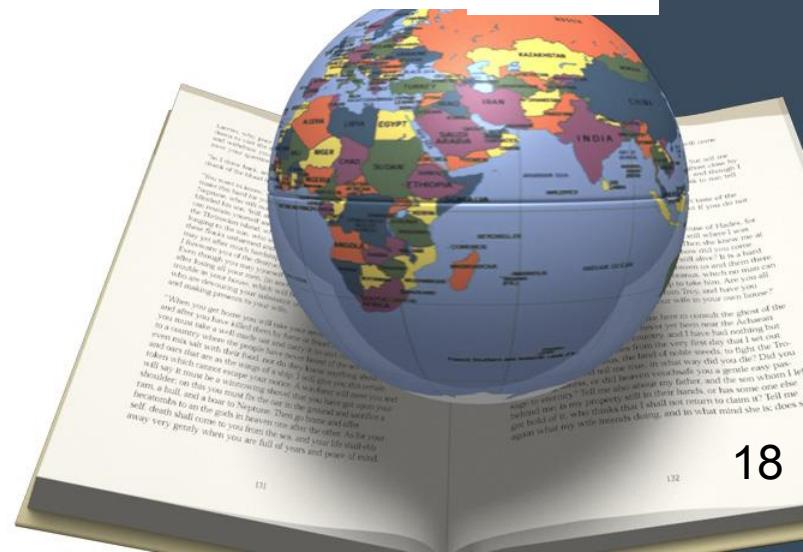
## **10. PATENTS Act**

# Novelty

s14(1) provides that an invention shall be taken to be new if it does not form part of the state of the art.

The inquiry for novelty involved 2 steps:

The first is to identify all the relevant pieces of ‘prior art’ for the invention in question. The second is to assess whether the invention has been anticipated by any of these pieces of prior art.

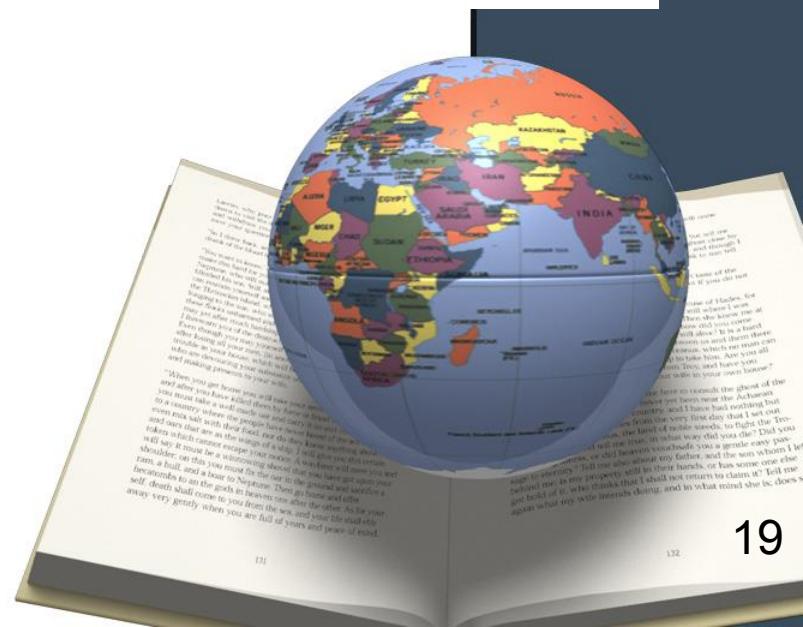


# 10. PATENTS ACT

## Novelty

s14(2) defines what prior art is.

It is any matter that has, as at priority date of the invention, been made available to the public in any way.

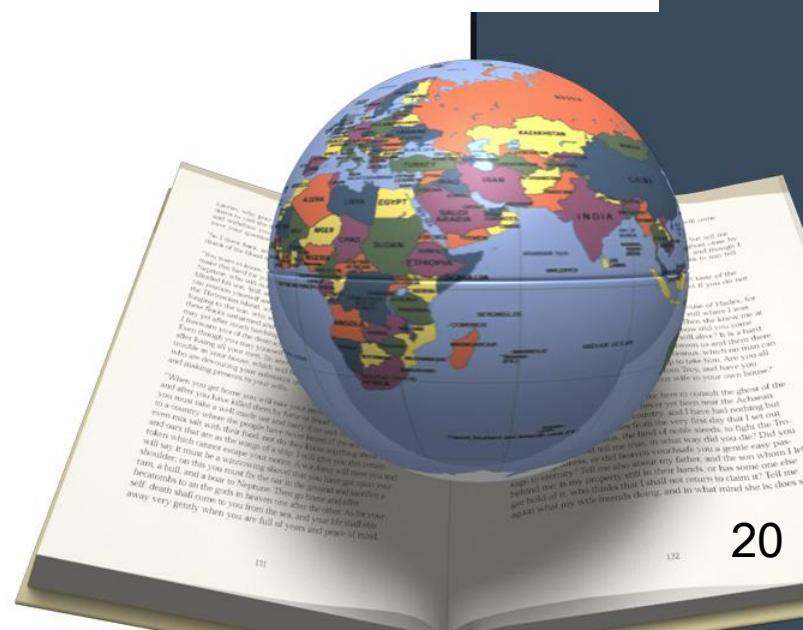


# 10. PATENTS ACT

## Novelty

s14(3)-(4) The priority date of the invention is the date of filing the patent application in Singapore.

If there is a claim of priority based on an earlier application filed in a WTO/Paris Convention member country, the priority date of the Singapore application would be backdated to the filing date of the foreign application. s17

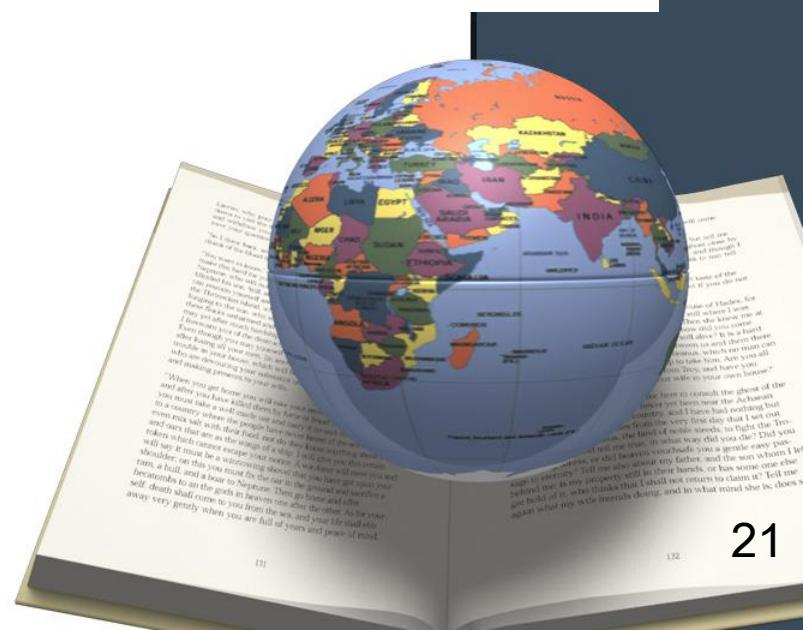


# 10. PATENTS ACT

## Novelty

To qualify as relevant prior art, the prior disclosure or use must have been made available to the public.

This condition is satisfied even if the disclosure has been made available only to a single member of the public. Further, it is irrelevant whether anyone knew that it was available or had inspected it.



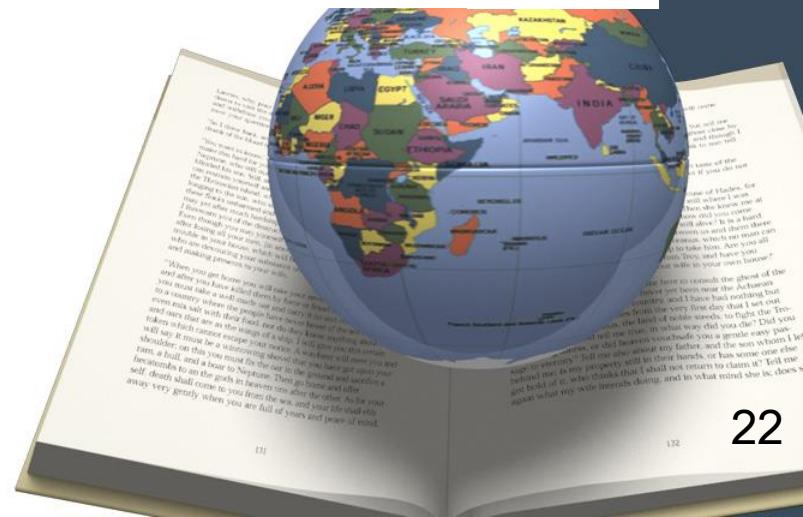
# 10. PATENTS ACT

## Novelty

### First Medical Use:

The fact that a substance is known does not destroy the novelty of the use of this substance in a method of medical treatment s14(7).

This exception is a legal fiction, justified on the basis of the potential benefits to mankind when research is done on known compounds to study their medical and therapeutic effects.

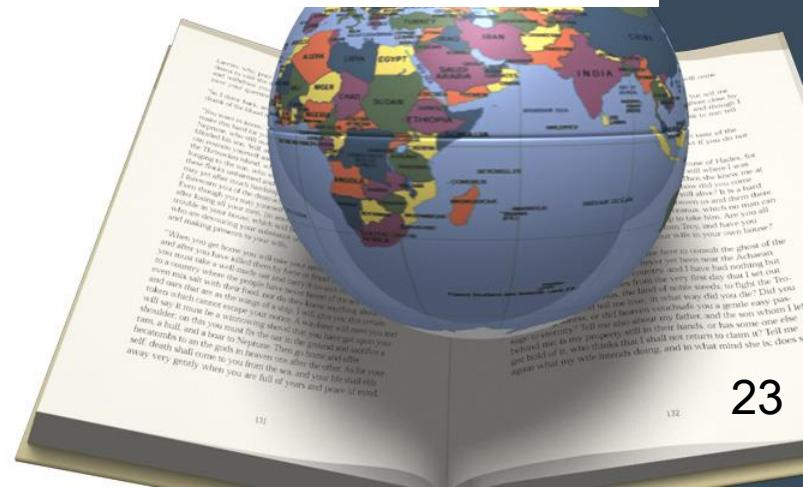


## **10. PATENTS Act**

# Novelty

## New Use to Old Products:

In Mobil/Friction Reducing Additive, the patent applied for related to a compound for use as an additive for lubricating oils. The purpose of the additive was to reduce friction between sliding surfaces in an engine. A prior US patent disclosed the use of the same compound as an additive for motor oils for the purpose of inhibiting the formation of rust, but did not expressly describe the friction-reducing property.



# 10. PATENTS ACT

## Novelty

Has the inventions been anticipated by any of these pieces of prior art?:

1. The assessment is made through the eyes of “the person skilled in the art”. The “audience” whom the patentee is addressing is the person skilled in the art.

As a general rule, the notional skilled person should be taken to be the workman or technician who has the skill to make routine workshop developments, but not to exercise inventive ingenuity or think laterally.

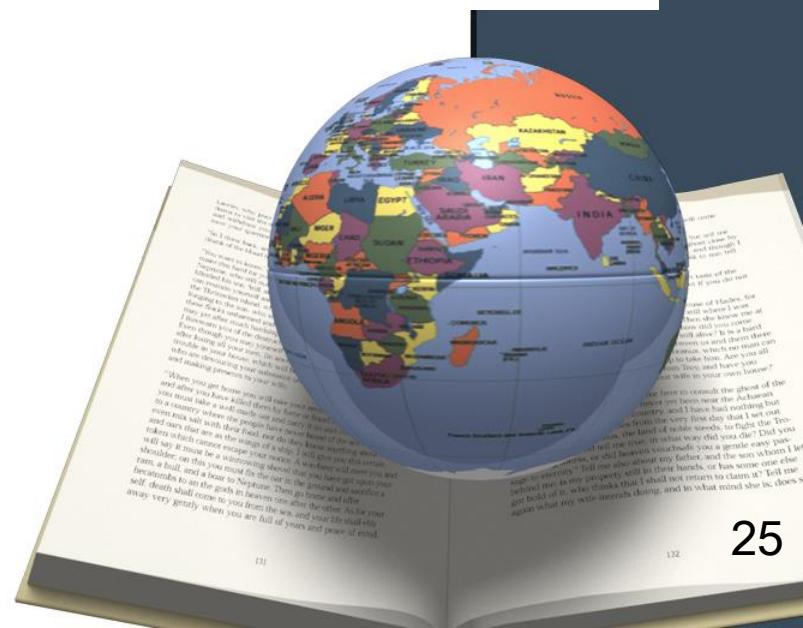


# 10. PATENTS ACT

## Novelty

Has the inventions been anticipated by any of these pieces of prior art?:

2. There is a rule against “mosaicing” the different pieces of prior art in the assessment of novelty. Under this rule, it is not permissible to assemble all the pieces of prior art together into a “mosaic” and then to compare the invention against this “mosaic”.

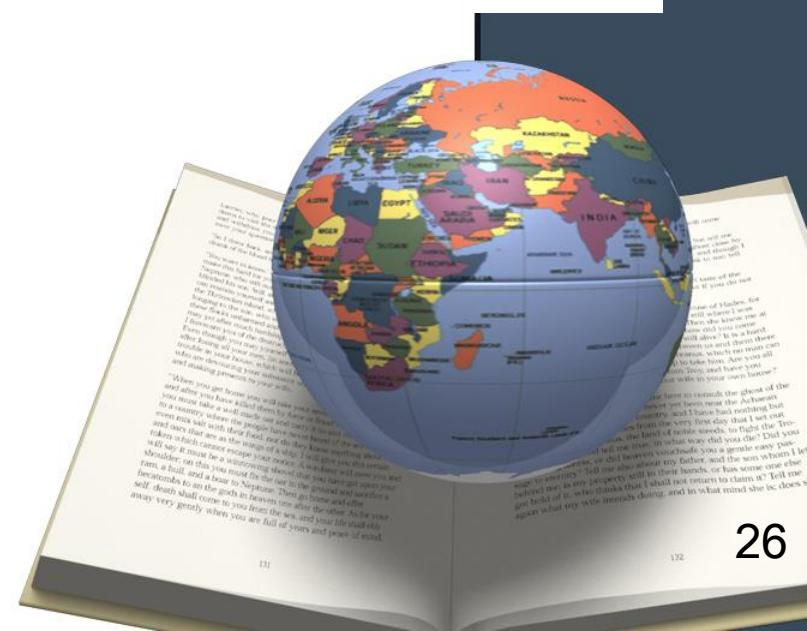


# 10. PATENTS ACT

## Novelty

Has the inventions been anticipated by any of these pieces of prior art?:

3. The general test used to assess anticipation is to ask the "would-it-inevitably-lead-to-invention" question, i.e. following the teachings disclosed in the piece of prior art would inevitably lead to the invention, the prior art has anticipated the invention.



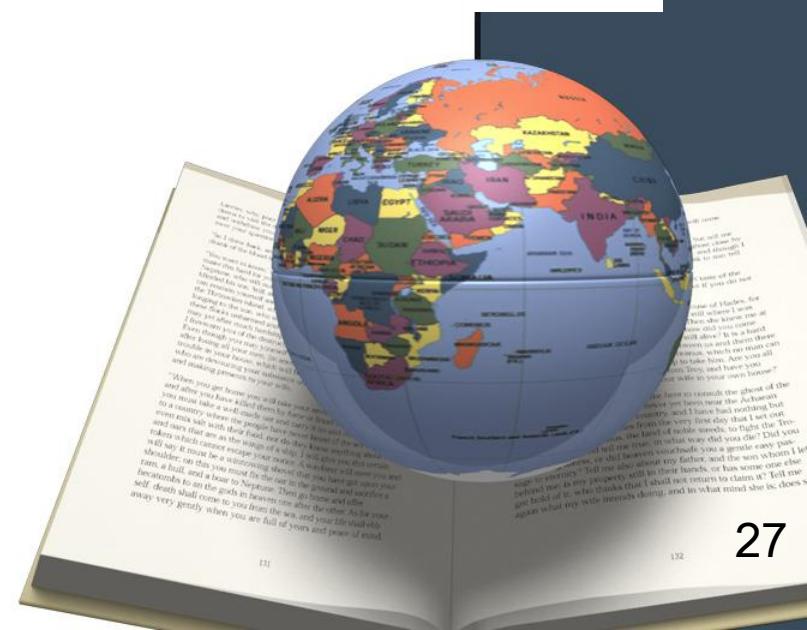
# 10. PATENTS ACT

## Novelty

Has the inventions been anticipated by any of these pieces of prior art?:

4. One variation is to ask whether the prior art contains “clear and unmistakable directions” to the invention, or is only a “signpost” to the invention.

5. Alternatively, the question may be posed in this way: Was the disclosure in the prior art a “near miss”?



# 10. PATENTS ACT

## Novelty

**Has the inventions been anticipated by any of these pieces of prior art?:**

6. It has also been held that the invention is anticipated by a piece of prior art if the disclosure in this prior art is an "enabling disclosure".

An 'Enabling Disclosure' is a requirement in patent law that obliges the inventor to describe, in the specification of the patent, the invention in a manner that is clear and complete for the invention to be made by the skilled addressee.

(The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention )

# **10. PATENTS ACT**

## **Inventive Step/Obviousness**

An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of s14(2) and without having regard to s14(3).

**Who is the person skilled in the art?**

The unimaginative skilled technician.

**Factors to note:**

- No benefit of hindsight
- Mosaicing is permissible
- The ‘Well-Worth-Trying’ Guide
  - the “well-worth trying” guide entails that the invention is obvious if the skilled addressee would have felt that the invention was well worth trying to solve a problem or achieve a beneficial result.
- The ‘Lying-on-the-Road’ Guide
  - the “lying on the road” guide, applied in the same case above, where the invention is obvious if the prior art was “lying on the road”, and free for the research worker to use.

# End of Lecture 10

## Q&A

