

PATENTABLE SUBJECT MATTER AUSTRALIA

Patentable Subject Matter in Australia falls into two main categories:

- Is it a 'manner of new manufacture'?
- Is it excluded subject matter by law?

The failure of a claim to define a patentable invention will be a ground of refusal during examination, and a ground for revocation/cancellation.

EXCLUDED SUBJECT MATTER

There are some subject matters that are excluded by Australian legislation from being part of patentable subject matter.

BIOLOGICAL MATERIALS

Human beings and biological process for generation. Section 18(2) of the *Patents Act 1990* (Cth) (Australia) prohibits patents for human beings and biological processes for generation. This will include:

- Fertilised human ova and equivalents, zygotes, blastocysts, embryos, fetuses and totipotent human cells; and
- Methods of in vitro fertilisation, sperm injection, cloning, growing fertilised ova, introducing transgenes and donor genetic cytoplasmic material into fertilised ova, and methods of obtaining embryonic stem cells which include making an embryo.

However, not all biological material and processes is excluded as patentable subject matter. The following subjects may be patentable:

- a microorganism, protein, enantiomer or antibiotic in its isolated form;
- a recombinant, isolated or purified gene;
- a gene per se, provided the claim does not include within its scope the native chromosome of which the gene forms part.

- living organisms are patentable provided they are not in a naturally occurring state and they had been improved or altered.

Even within the regeneration of human beings, some subject matter has been held to be patentable including:

- cryopreservation of gametes;
- preimplantation genetic analysis of gametes, and
- determining the developmental progress or viability of a fertilised ovum, blastocyst or embryo, by analysis of culture or incubation media.

CONTRARY TO LAW

Matters that are contrary to law are not patentable. Australia does not have a general contrary to public order provision like the EU. Objections are rare because it is limited to situations where the only use of the patent is an unlawful use. An unlawful use is a use that is a criminal act or which would be an offence under Australian law. For example, human cloning is contrary to *Human Cloning Act* (2002) and patents for human cloning would be contrary to law.

INNOVATION PATENTS

Plants and animals and the biological process for the generation of plants and animals. Section 18(3) of the *Patents Act 1990* (Cth) Australia prohibits innovation patents for plants and animals and the biological process for the generation of plants and animals.

However, s 18(3) will not apply if the innovation patent is for a microbiological process or is a product of such process.

In addition, to excluding plants and animals, the same exclusions discussed above concerning human beings and the biological processes for the generation of human beings also applies to innovation patents.

METHOD OF NEW MANUFACTURE

Under Australian patent law, the definition of 'invention' is not limited. It includes any manner of new manufacture. It is left to the courts to determine what is a 'manner of new manufacture' and, as such, what will be considered patentable subject matter in Australia.

The criteria applied by the courts is whether the invention results in an artificially created state of affairs and is economically useful (the NRDC case¹). In some fields of innovation, such as methods of medical treatment, business methods and computer software the application of this criteria is still uncertain.

METHODS OF MEDICAL TREATMENT

A method of medical treatment is patentable provided it is a an artificially created state of affairs and has economic utility. The following methods of medical treatment have been patented in Australia:

- cosmetic treatments, that is processes or methods for improving or changing the appearance of a part of the human body, having a commercial application;
- a process of curative treatment of the human body provided they have commercial application; and
- the administration of therapeutic drugs to humans.

COMPUTER SOFTWARE

Computer processes of economic utility, source code and executable code are patentable subject matters.

Mathematical algorithms. Mathematical algorithms are patentable subject matter provided they are implemented in a useful way. If the algorithm results in some form of physical transformation, such as a new business method, then it will be patentable. However, an algorithm dealing with mathematical symbols and variables with no apparent purpose is not patentable.

Business methods

A business method that results in a useful, physical phenomenon or effect is patentable subject matter. Methods that claim a technical solution or technical advantage generally satisfy

¹ *National Research Development Corporation v Commissioner of Patents* (1959) 102 CLR 252

these criteria, such as computerised accounting, monitoring, reporting or analysis systems.

Usually, the technological implementation satisfies the 'physical effect' requirement test if

the implementation is directly involved in the operation of the method. However, the use of a computer to merely record information is unlikely to be patentable.

STANDARD PATENTS

Table 1 -Fundamental bases for categories being considered unpatentable

Historical category	Lack of practical utility	Non economic	Non man-made	Lack of novelty & inventiveness
Discoveries, ideas & theories	x		x	
Laws of nature	x		x	
Fine arts	x	x		
Schemes, plans & methods of doing business	x		x	
Mathematical algorithms with no practical implementation	x			
Printed matter characterised solely by the content	x			
Methods of treating humans		x	x	
Living organisms			x	
Agricultural & other processes not producing/treating a man-made object			x	
Animals and plants and the biological processes for the generation of plants and animals		OK standard patents No innovation patents		
Analogous uses				x
Methods of testing, observation & measurement				x
Working directions for operating a known product or process				x
Collocations, kits & packages of known integers				x
Foods or medicines that only exhibit known properties of the ingredients				x

(Modified from IP Australia)