Bilski & Brimelow.

Computer programs
and
Business Methods.

Stephen Krouzecky
10 September 2010

watermark
Intellectual Asset Management

Software Patents
& Business Methods

And what about the land
downunder mate?

The Australian Position.

10 September 2010

Introduction

Past FICPI presentations on Business Methods

- – USA
- – Europe
- – Japan
- – Canada
- – India

And now…. Australia (& New Zealand)

FICPI Survey 2007.

Software
e-Commerce
&
Business Methods

Results.

Restricted to technical subject-matter

By statute

- China, Colombia, Czech, Denmark, Spain, Finland, France, UK, Greece, Ireland, Japan, South Korea, Portugal, South Africa

By case law

- Austria, Canada, Switzerland, Germany, Italy

By administrative guidelines

- Argentina, Canada, Finland

No

- **Australia**, New Zealand, USA

Results.

Not patentable

Type	By statute	By case law
Laws of nature	AR, CA, CN, CO, CZ, DE, DK, FR, ES, FI, GB, GR, IT, JP, KR, PT, US, ZA	AT, **AU**, CH, IL, NZ, US
Abstract ideas	AR, CA, CN, CO, CZ, DK, ES, FR, GB, GR, IT, JP, KR, PT, US, ZA	AT, **AU**, CH, DE, FI, IL, NZ, US
Mental activity	AR, AT, CN, CO, CZ, DE, DK, ES, FR, FI, GB, GR, IE, IT, JP, KR, PT, US, ZA	**AU**, CA, CH, IL, NZ, US
Presentation of information	AR, AT, CH, CN, CO, CZ, DE, DK, ES, FR, FI, GB, GR, IE, IT, JP, KR, PT, US, ZA	CA, IL, US
Business methods	AR, AT, CN, CO, CZ, DE, DK, FI, FR, GB, GR, IE, IT, ZA	CH, ES, IL, PT
Computer software	AR, AT, CN, CO, CZ, DE, DK, ES, FI, FR, GB, GR, IE, IT, PT, ZA	CA, IL

Results.

Special rules, regulations or examination guidelines

Software-related patents	AR, **AU**, CA, CH, CN, CZ, FI, FR, IL, JP, KR
Business methods patents	**AU**, CA, CH, FI, FR, IL, JP, KR
No	AT, CO, DE, DK, ES, GB, GR, IE, IT, PT, NZ, US

Invention object technical/non-technical

Solutions to technical problems patentable only	AR, AT, CN, CO, CZ, DE, DK, ES, FI, FR, GR, IE, IL, IT, JP, KR, PT
Solutions to non-technical problems patentable also	**AU**, ES, NZ, US

Hardware means necessary

Yes	AT, CA, CH, CN, CO, CZ, DE, DK, ES, FI, GR, IE, IL, JP, KR, NZ
No	AR, **AU**, FR, GB, IT, PT, US

Results.

Claim types

Computer system or network	AR, AT, **AU**, CA, CH, CN, CZ, DE, DK, ES, FI, FR, GB, GR, IE, IL, IT, JP, KR, NZ, PT, US
Method	AR, AT, **AU**, CA, CH, CZ, DE, DK, ES, FI, FR, GB, GR, IE, IL, IT, JP, KR, NZ, PT, US
Data structures	AT, **AU**, CA, DE, IE, IL, IT, JP, KR, NZ, US
Computer program stored on a storage medium	AT, **AU**, CA, CH, CN, DE, DK, ES, FI, FR, GR, IE, IL, IT, JP, KR, NZ, PT, US
Computer program embodied in a signal/carrier wave	AT, **AU**, CH, DE, FI, FR, GR, IL, IT, NZ, US
Computer program per se	**AU**, DE, FI, JP, NZ, US

Results.

Patentable invention types

| Type	Yes	Probably	No
Improved secure online payment method	**AU**, DE, GR, IE, IL, IT, KR, NZ, US	AT, CA, CZ, DK, ES, FI, FR, GB, PT	AR, CH, CN, CO, JP
Improved online shopping user interface	**AU**, CZ, GR, IT, KR, US	CA, DE, ES, FI, FR, JP, NZ, PT	AR, AT, CH, CN, CO, DE, DK, GB, IE, IL
Mobile telephone payment scheme	JP, KR, NZ, US	**AU**, CA, ES, FI, FR, GR, IL, IT, PT	AR, AT, CH, CO, CN, DE, DK, GB, IE
Software implementing a novel commodity trader scheme in a straightforward manner	KR, NZ, US	**AU**, CA, ES, IT, JP	AR, AT, CH, CN, CO, DE, DK, FI, FR, GB, GR, IE, IL, PT
Software implementing a known commodity trader scheme having improved software functionality	**AU**, IL, KR, US	DE, DK, ES, FI, FR, GB, IE, IT, JP, NZ	AR, AT, CH, CN, CO, GR, PT
New computer based training method	**AU**, IL, KR, NZ, US	AT, CA, ES, FR, GR, IT	AR, CH, CN, CO, DE, DK, FI, GB, IE, JP, PT
New not-computer based training method	US	AT, CA, NZ	AR, **AU**, CH, CN, CO, DE, DK, ES, FI, FR, GB, GR, IE, IL, IT, JP, KR, PT

Results.

Other forms of software protection

Copyright	AR, AT, **AU**, CA, CH, CN, CO, CZ, DE, DK, ES, FI, FR, GB, GR, IE, IL, IT, JP, KR, NZ, PT, US, ZA
Database protection	AT, DE, FI, FR, GB, IE, IT, JP, KR, NZ, US
Trade secrets	AR, AT, **AU**, CH, CZ, DE, DK, FI, FR, GB, IL, IT, JP, KR, NZ, US, ZA
Unfair competition law	AR, AT, CH, CZ, DE, DK, ES, FI, FR, GR, IT, JP, KR, NZ, US, ZA
Design (e.g. screen design)	AT, CA, CH, (CZ), DE, DK, FI, FR, GB, IE, IL, IT, JP, KR, NZ, ZA
Utility models	AT, DE, DK, FI, IE, JP, KR

Innovation patents

- innovative step
- 8 year term

The Inventions.
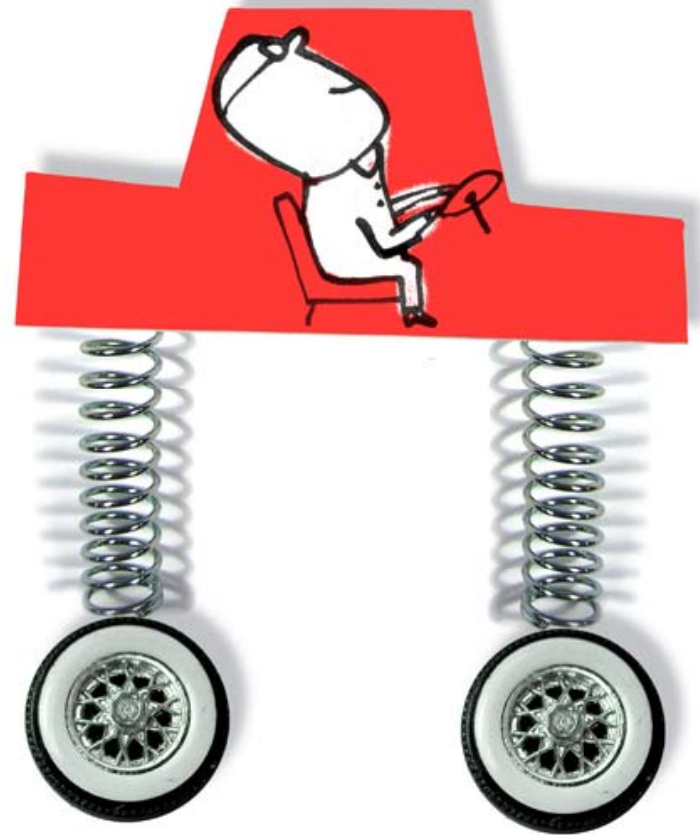
Computer Software.

1. IBM – Australian Patent 639173

Application software for displaying a curve image on a
graphics display using the B-spline form

Idea
–   curves produced using B-spline form are more accurate
than previous methods using floating point method

Main Claim – IBM

    1.   A method for producing a visual representation of a curve image from a set of control points which define the curve and which are input for each dimension and a number of intervals of the curve to be computed, said method comprising the steps of:

    (a)   computing a set of scaled vector coefficient integers for each dimension from the set of input control points for that dimension and from a scaling parameter;
    (b)   computing forward difference interval coefficient integers for each dimension for each interval from the scaled vector coefficient integers for that dimension and the interval integer number;
    (c)   computing the curve coordinate values for each interval for each dimension from the forward difference interval coefficient integers for that dimension for each interval and the scaling parameter; said computing steps being carried out without the use of floating point arithmetic; and
    (d)   displaying the curve by displaying curve coordinate points in accordance with the computed curve coordinate values for each dimension and a plurality of straight lines which successively connect said computed curve coordinate points.

    14. An apparatus when used to produce a visual representation of a curve a image in accordance with the method of claim, said apparatus comprising:

    input means for receiving a plurality of data points defining the curve image and a number of interval computations to be performed between said data points;
    digital processing means for pipeline computing curve coordinate values for each dimension for a plurality of intervals simultaneously; and
    displaying means for producing the visual representation of the curve image by displaying curve coordinate values for each dimension and a plurality of straight lines which successively connect said computed curve coordinate points.

Computer Software.

2. CCOM – Australian Patent 616154

Application software for Chinese language word processor for assembling Chinese characters for creating text

Idea

– accumulation and characterisation of successive character strokes to create a set of all possible Chinese characters incorporating the character strokes for display

– additional strokes refine and reduce set until desired character for typing appears

– user selects desired character to type from displayed set

Main Claim – CCOM

1.   Computer processing apparatus for assembling text in Chinese language characters, said computer processing apparatus including:-

    a memory including character stroke data storage means which stores data relevant to Chinese character stroke-type categories, Chinese characters and the order in which character strokes of respective Chinese characters are written and complementary graphic data storage means from which data relevant to the graphic representations of each said Chinese character may be retrieved;

    display means for displaying Chinese language characters retrieved from said graphic data storage means;

    a keyboard having a plurality of input entry keys including character stroke-type category entry keys designated by indicating means indicative of respective ones of said Chinese character stroke-type categories and selection means for selecting one of a plurality of characters displayed by said display means;

    and wherein said character stroke data storage means are searched by entering through said input entry keys search criteria including the entered Chinese character stroke-type categories and the order in which the character stroke-type categories are entered through said input entry keys, whereby upon entry of said search criteria the graphic representation of the or each Chinese character which meet said search criteria are retrieved from the corresponding graphic data storage means and displayed by said display means; and

    said selection means being operable to select one of said retrieved graphic representations of Chinese characters whereby text in Chinese language characters may be assembled.

Business Methods.

1. Marketlink– Australian Patent 712925

Process and device for operating smart cards with a POS terminal for providing a merchant's loyalty program

Idea
–   to "dynamically" store information of each merchant's loyalty program as a separate record in a Behaviour file on the smart card
–   each merchant's loyalty program was added to the Behaviour file by the POS terminal the first time the cardholder used the smart card at the merchant's store
–   loyalty programs of merchants that the cardholder never visited were never entered onto the smart cart

Main Claim − Marketlink

1.   Method of processing coded information during a purchase or payment operation by a customer, holder of a card with a chip, at a trader's, in which the contents of the memory of the chip card are read and a coupon is or is not printed on the basis of the information arising from the contents of said memory,

   characterized in that, with the memory of the chip card including a first identification file, termed the Member file, identifying the card-holding customer, a second accounting file, termed the Points file, and a third file, termed the Behavior, relating to the behavior of the card holder towards the user trader or traders,

   a specified algorithmic processing is performed dependent, on the one hand, on the sate of the operation and, on the other hand, on the information contained in said files, including the Behavior file,

   the algorithmic processing including a step of incrementing or decrementing the Point [sic] file by a predetermined number of points depending on the frequency and/or the nature of first, second or xth visit by the card holder over a time period of specified duration,

   the coupon is printed only if the number of points contained in the Points file is greater than a specified value then data is written to the Points file,

   new information is written to the Behavior file,

   and said coupon is or is not printed on the basis of the result of said algorithmic processing.

Business Methods.

2. STEVEN GRANT − Australian Innovation Patent
    Application 2003100074

Method for protecting an asset owned by an owner

Idea
− structuring a financial transaction to protect an individual's
   assets, such as real property, from legal liability or at financial
   risk
− utilises a particular methodology involving a trust, a gift, a
   loan and a security to achieve this

Main Claim – Grant

An asset protection method for protecting an asset owned
by an owner, the method comprising the steps of:
establishing a trust having a trustee,

(a)   The owner making a gift of a sum of money to the trust,

(b)   The trustee making a loan of said sum of money from the trust to the owner,
and

(c)   The trustee securing the loan by taking a charge for said sum of money
over the asset.
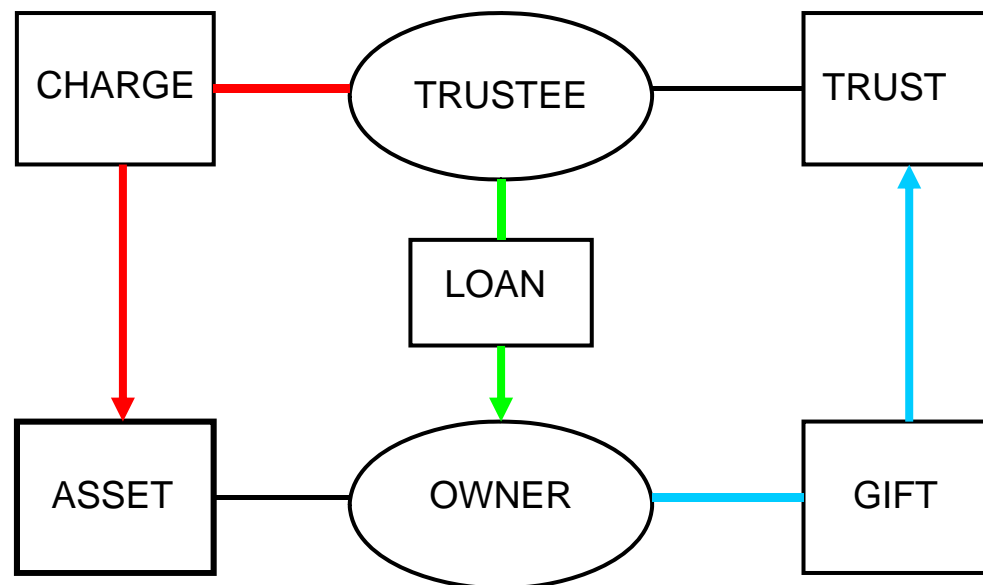
Business Methods.

Invention pathways – Australian Patent Application
2009201212 (Invention pathways)

A method for commercialising inventions including applying for
patent protection

Idea

– commercialisation planning process for inventions
– particular commercialisation or related business activities
 are completed within a timeline associated with various IP
 law/treaties (e.g. Paris Convention/PCT)
– entering information associated with commercialisation or
 business activities into an electronically fillable checklist
– policing compliance with deadlines for action through
 production of reminders

Main Claim – Invention Pathways

1.   An invention specific commercialization system to facilitate success of inventions, the system including the steps of:

   a) applying for patent protection for the invention in a country which is party to the Paris Convention,

   b) conducting a review of specific commercialization process required by the invention,

   c) preparing a research and development plan, testing the business dynamics of the invention,

   d) conducting prototype testing, developing a prototype cost/benefit analysis,

   e) determining product positioning and packaging,

   f) conducting a manufacturing checklist,

   g) entry of the information collected in steps a) to f) into an electronically fillable checklist having a prescribed time limit for each step to form a commercial entry strategy (CES) with a number of sub-steps, the CES prepared on the basis that each of the sub-steps in the CES are to be completed by a corresponding deadline, all deadlines falling within 30 months from the earliest priority date of the patent application, the checklist being computer-implemented and stored in computer or human readable format in data storage means and associated with processing means to allow updating of the checklist; and

   h) policing compliance with the deadlines for the completion of the sub-steps through the production of reminders based on the prescribed time limits in the checklist to ensure that all sub-steps are completed within the deadlines.

The Law.
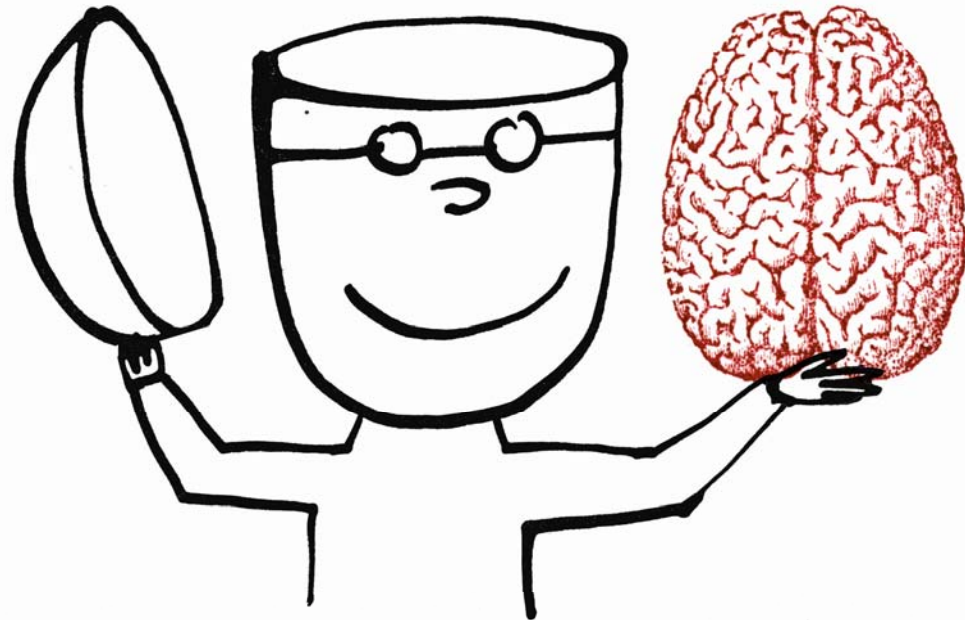
Statute.

1. **Types of Patents**
   – Standard Patent
   – Innovation Patent

2. **Patentable Invention**
   – Manner of manufacture within meaning of Section 6 Statute of Monopolies
   – Novel
   – Inventive step (standard patent)
   – Innovative step (innovation patent)
   – Useful
   – Not secretly used

Statute.

3. Section 6 Statute of Monopolies

– Exception to prohibition of monopolies
– Prohibition to not extend to patents of … any manner of new manufactures
– That were also not:
  - Contrary to law
  - Mischievous to the State
  - Generally inconvenient

4. Other exceptions

– Human beings

Case Law
Manner of Manufacture.

1. Exclusions

Working directions:

▪ directions as to how to operate a known article or machine or to carry out a known process so as to produce an old result

Methods of calculation and theoretical schemes, plans and arrangements

Known substance for making a new article for which known properties of substance make it suitable to use (Microcell)

Case Law
Manner of Manufacture.

2. NRDC

Subject matter:

- process for ridding crop of particular weeds using chemicals previously supposed to not be useful for this purpose

Mistake to limit thinking of what is patentable to what can be made by hand or machine

Right question is: "Is this a proper subject of letters patent according to the principles which have been developed for the application of s6 of the Statute of Monopolies?"

Case Law
Manner of Manufacture.

2. NRDC (cont)

Granting patents for new inventions to encourage national development:

- undesirable to fetter what can be patentable by exact verbal formula

A patentable process must offer some *material* advantage in the sense that process belongs to a '*useful art as distinct from a fine art*' –

- its value to the country is in the field of economic endeavour

- must have an industrial or commercial or trading character

Case Law
Manner of Manufacture.

2. NRDC (cont)

Product in sense of 'vendible product' produced by a process is: *'only something in which the new and useful effect may be observed'*

- ▪ "something" need not be a "thing" in the sense of an article
- ▪ any physical phenomenon in which the effect may be observable

In 'vendible product': covers: *every end produced*

- ▪ "product" covers every end produced
- ▪ "vendible" only means there be utility in practical affairs

Case Law
Manner of Manufacture.

2. NRDC (cont)

Method has as its end result an *artificial effect* that was within the true concept of what must be produced by the method to be patentable

The effect produced by the method exhibits two essential qualities:

- consists in an artificially created state of affairs
- is beneficial in a field of economic endeavour

If there is nothing that can be called a *'product'* of the process, then not patentable

Case Law
Manner of Manufacture.

3. IBM v Commissioner of Patents (AU IBM)

Commissioner's objection: claim recited a mathematical algorithm that it wholly pre-empted

Court: claim 1 construed to having a necessary inference confining the claim to the operation of computers

Consideration of principles of NRDC:

- application of selected mathematical methods to computers for the production of curved images is what is inventive
- production of an improved curved image is a commercially useful effect in computer graphics

Case Law
Manner of Manufacture.

3. AU IBM (cont)

Consideration of US Diamond v Diehr principles

- formula applied to achieve an end: production of the improved curved image
- method of producing that using computer is entitled to patent protection

UK Burroughs Corporation (Perkin's) Application pre 1977 Act followed (UK Burroughs)

- not to take a narrow and confined view of "product" produced by the method
- method results in a new machine or process or an old machine giving a new and improved result that is the "product" that results from the method

Case Law
Manner of Manufacture.

4. CCOM v Jiejing (CCOM)

Primary judge:

- inter alia, claims not for a manner of manufacture within the meaning of s6 of the Statute of Monopolies

- material feature resided in procedures used to organise and process data
  - means by which Chinese characters are categorised by stroke-type category and stroke order
  - use of such criteria to retrieve and display Chinese characters
which is the product of human intellectual activity lying in the fine arts and not the useful arts

Case Law
Manner of Manufacture.

4. CCOM (cont)

UK International Business Machines Corporation Application
(UK IBM)

- method involving the operation or control of a computer programmed in a particular way to operate in accordance with the method was more than "intellectual information" because the method was involved in the program and in the apparatus in a physical form

NRDC followed

- Relevant field of economic endeavour is the use of word processing to assemble text in Chinese language characters
- End result is the retrieval of graphic representations of desired characters

Case Law
Manner of Manufacture.

5. Welcome Real-Time v Catuity (Catuity)

Respondent's objections:

–   should be distinguished from AU IBM and CCOM –
    despite occurring in a computing environment, there was
    no physically observable effect

–   making an article out of a known substance for which its
    known properties make it suitable, even though it has not
    been used to make that article before

Case Law
Manner of Manufacture.

5. Catuity (cont)

NRDC, UK Burroughs and UK IBM followed

AU IBM and CCOM considered: invention not distinguishable from those

US State Street Bank v Signature (US State Street) considered

- transformation of data through a series of mathematical calculations constituted a practical application of a mathematical algorithm formula and calculation
- produced a useful, concrete and tangible result

Case Law
Manner of Manufacture.

5. Catuity (cont)

Artificial state of affairs: issuing smart cards that make available to consumers different loyalty programs of different traders and different programs of the same trader

Beneficial in a field of economic endeavour: retail trading

- enables many traders to use loyalty programs and compete more effectively for business
- competition beneficial to consumer in getting discounts and free goods and services

Case Law
Manner of Manufacture.

5. Catuity (cont)

Not a business method in the sense of a method or scheme for carrying on business: rather a method and device involving components *in* business

No precedent for requirement of a "physically observable effect"

US State Street decision is persuasive despite being US

Not *mere* new use of a known article for which the known properties of that article make it suitable: problem of using limited memory chip cards was overcome

Case Law
Manner of Manufacture.

5. Catuity (cont)

General inconvenience argument dismissed

- Monopolising known integers for a loyalty scheme
- Preventing traders from using those integers in their own loyalty schemes

If invention satisfies patentability requirements not a complaint that others will be restricted in trade because they cannot lawfully infringe the patent – defeats whole purpose of patent law

Case Law
Manner of Manufacture.

6. Grant v Commissioner of Patents (Grant)

Commissioner's objections

Not a manner of manufacture within s6 of the Statute of Monopolies

- mere use of known substances – which also did not result in a *'vendible product'*
- no discovery of a law of nature
- no application of technology in some form to perform the process
- claimed invention does not result in an *'artificially created state of affairs'*

Case Law
Manner of Manufacture.

6. Grant (cont)

NRDC applied: patentability of new scientific discoveries and technologies should not be fettered by contrived constraints

Similarities with USA: concept of patentability must be able to accommodate inventions not yet envisaged

Policy behind law on patentable inventions in AU and US is the same: broad approach to subject matter should be take to adapt to new technologies and inventions, but there are still restrictions on what is properly patentable

Case Law
Manner of Manufacture.

6. Grant (cont)

Considered historical development of patentable invention: CCOM, Catuity, UK Burroughs, UK IBM, AU IBM, US State Street, US AT&T

Not a question of whether a business system is or is not patentable; issue is compliance with requirements of Act, including whether it is a *manner of manufacture*

Product of a method is something in which *a new and useful effect may be observed*; more than involvement of "intellectual information"

Case Law
Manner of Manufacture.

6. Grant (cont)

Underlying principle: business, commercial and financial schemes, which are "intellectual information" are not patentable

Subject invention does not produce any artificial state of affairs in the sense of a concrete, tangible, physical and observable effect

Method results in an abstract, intangible situation:
- unsecured creditor with judgement against user of method cannot levy against user's assets that are subject of charge

Case Law
Manner of Manufacture.

6. Grant (cont)

Physical effect is necessary

- concrete effect or phenomenon or manifestation or transformation

Alleged invention is a mere scheme, abstract idea, mere intellectual information: there is no physical consequence

Legal advices, schemes, arguments are not patentable

Not necessary that alleged invention be within the area of science and technology

Case Law
Manner of Manufacture.

6. Grant (cont)

No specific interaction between steps that effected a new working; end result effected by mere taking of sequential steps, collocation of integers, rather than a new combination

Scheme is a new use of known products with known properties that make them suitable for scheme purpose

Not relevant whether a method or product will advance the public interest or not; court not to determine balance between social cost and public benefit

Case Law
Manner of Manufacture.

Invention Pathways

Deputy Commissioner considered NRDC, CCOM, Catuity, Grant, US State Street and US Supreme Court Bilski v Kappos (US Bilski)

Applied NRDC and distinguished inventions in Catuity and US State Street from Invention Pathways

Mere presence of "physical phenomenon or effect" without considering material advantage, not conclusive

Case Law
Manner of Manufacture.

Invention Pathways (cont)

Grant does not equate the requirement of an artificially created state of affairs merely with the identification of some "physical effect"

Distinction between useful and fine arts has never been held to be determined merely by the presence or absence of a physical step or element

Physical effect must be of such substance or quality that the method considered as a whole is "proper subject of letters patent…"

Case Law
Manner of Manufacture.

Invention Pathways (cont)

Observed: limiting formula to use in a technological environment or adding insignificant post-solution activity does not confer patentability to abstract ideas (US Bilski);

- equates to considering subject matter of claim as a whole and whether physical effect or transformation alters fundamental character

"concrete effect or phenomenon or manifestation or transformation" in Grant must be significant both in:

- that it is concrete and central to the purpose or operation of the claimed process or otherwise arises from the combination of steps of the method in a substantial way

Case Law
Manner of Manufacture.

Invention Pathways (cont)

Physical effect of electronically filling checklist is peripheral and subordinate to substance of claimed method:

- a scheme for commercialisation of inventions

Collection and presentation of information has no physical consequence other than would arise in the computer with standard software in normal use

method also not patentable because merely represents new use of a known product (a computer with standard software) with known properties that make it suitable

Recent developments.

New Zealand.

Present Law – Patents Act 1953

Invention:

–   any manner of new manufacture the subject of letters patent and the grant of privilege within s6 of the Statute of Monopolies

–   any new method or process of testing applicable to the improvement or control of manufacture

New Zealand.

Proposed Amendment to Patent Law – Clause 15(3A)

"A computer program is not a patentable invention"

No "as such" limitation

Inconsistent with Australian law despite Trans Tasman Mutual Recognition and proposed integration of procedural aspects of patent and trade marks law between AU and NZ

Guidelines being prepared to allow patenting of embedded software

Any questions?

Thank
You

Contact:
Steve Krouzecky
+61 2 9888 6600
s.krouzecky@watermark.com.au
www.watermark.com.au