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Search Strategies

Topic 12: Validity and Invalidity Search; Practical

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Contents

- What is a validity or invalidity search?
- Starting points:
  - known prior art
  - dates,where prior art is published anywhere in the world
  - dates, where prior art is an application made in the Phillipines
  - Novelty v Inventive step
  - Case studies and practical exercises

What is it?

- An invalidity or opposition search is to identify patent and non-patent documents which may impact the claims of a specific patent. This can help block patents and establish solidity of a patent portfolio which may be useful for licensing or company acquisition.

- “Impact the claims” – means challenge the novelty and inventiveness (ie demonstrate obviousness) of the claims of the patent.

Starting points – known prior art (1)

- Check any specific prior art references in the patent itself, and note any other references in the patent as to what the applicant acknowledges as known (generally to be found in the opening paragraphs of the description)

- It is unlikely that this check will furnish material for a novelty attack, but often it will give a guide as to where to begin looking in order to build an obviousness attack. *If the applicant specifically states that a particular technique or product is known, there is no need to search for it.*

Starting points – known prior art (2)

- Check the prior art references listed by the granting Patent Office during examination. Again, this is more likely to feed into an obvousness attack, but it‘s not unknown for a novelty disclosure to be buried away in a cited reference

- Check whether the client has knowledge of any relevant prior art – the publication date of which can be verified

Starting points – for prior art published anywhere in the world

- To challenge novelty or inventive step, the law states that prior art shall consist of:

  - *Everything which has been made available to the public anywhere in the world, before the filing date or the priority date of the application claiming the invention*

Dates - for prior art published anywhere in the world

- The patent will have a *filing da*te. If it is based on an earlier application then it may also claim a *priority date* up to a year earlier than the filing date.

- However, the validity of the priority date of the patent can be challenged, so for safety's sake, for the purposes of a validity search you should ignore any priority date. **Any references you find published before the filing date of the patent should be recorded even if they are published after the priority date.**

Starting points – for prior art in an application made in the Philippines

- The law also states that prior art shall consist of :
  - *The whole contents of an application for a patent, utility model, or industrial design registration, published in accordance with this Act, filed or effective in the Philippines, with a filing or priority date that is earlier than the filing or priority date of the application: Provided, That the application which has validly claimed the filing date of an earlier application under Section 31 of this Act, shall be prior art with effect as of the filing date of such earlier application: Provided further, That the applicant or the inventor identified in both applications are not one and the same.*

Dates for prior art in an application made in the Phillipines

- Hence if you find any Phillipines' applications relevant to novelty or inventive step, they should be recorded – whatever their publication date - as long as the priority date claimed in the application made in the Phillipines is earlier than the filing date of the patent. Which documents are entitled to which dates will eventually be a matter for attorneys and the court.

Novelty v Inventive step – the concepts

Novelty is a straightforward concept:

To show that a claim is not novel, you need to find a *single* document that describes *all* the features of the claim

Inventive step is a more complex concept:

To show that a claim is not inventive, you need to find a single document - or several documents taken together – that make the claimed invention obvious to *a person skilled in the art*.

Case study 1 - Novelty v Inventive step

The patent on which you are carrying out a validity search has the following claims:

Claim 1 – A tool having a cutting edge reinforced by an alloy including metal A.

Claim 2 – A tool as claimed in claim 1 in the form of a knife

Claim 3 – A tool as claimed in claim 1 in the form of a pair of scissors.

Claim 4 - A tool as claimed in any preceding claim, wherein the alloy also includes metals B, C and D.

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Search results

- There is no prior art acknowledged in the patent itself, and nothing was found in the Patent Office search.
- You carry out a first search directed to cutting tools made of particular alloys and a second search to alloys *per* se (even though there is no claim to an alloy *per se).*
- You find two documents of particular interest, both published before the filing date of the patent:
  - Document 1 describes a pair of scissors with its cutting edges reinforced by an alloy including metals A, B, C and D
  - Document 2 describes a wear resistant alloy comprising metals A, B, C, D and E; but does not mention cutting tools.

Conclusions on novelty

- Claims 1 and 3:
  - Document 1 has all the features of claim1 and all the features of claim 3 – and therefore shows that these two claims both lack novelty.
- Claims 2 and 4:
  - There is no single document having all the features of claim 2 or all the features of claim 4 – and therefore there is nothing to attack the novelty of either of these two claims.

Conclusions on inventive step

- Who is the person skilled in the art? - a manufacturer/designer of cutting tools.

- Assume that person is seeking to reduce wear on knives. If he read document 1, then arguably it would be obvious to him to apply the technique described in that document - in respect of scissors - to the knife of claim 2. There is therefore a strong case here that claim 2 is obvious.

- Similarly, If that person read document 2, then arguably it would be obvious to him to use the wear-resistant alloy described in that document to the cutting tool of claim 4. Again there looks to be a case here that claim 4 is also obvious

Combining documents

- There is no combining of documents here to make the case for lack of inventive step.

- However in more complex cases where a claim relates to a combination of features A, B, C .... if the combination cannot be found it will be necessary to search for the components individually in order to try and build an obviousness case. This is where a check of the acknowledged prior art may be fruitful.

However ....

- It is not the searcher‘s task to build a case, rather it is to find documents that might be used by an attorney to build a case

- And for this task, the searcher needs to be aware of the analysis that is required when deciding what to search, and the sort of documents to look

In short ....

- Having checked the known prior art, write out what you intend to search for.
- For each claim investigated:
  - (a) complete disclosure in a single document should be searched for to demonstate lack of novelty, and
  - (b) where this proves unsuccessful, the nearest prior art should be searched for to demonstate lack of inventive step
- If in doubt, the document should be noted for the client decide its relevance

Case Study 2

- Your client has developed a system for use by the police in high speed car chases. In use a signal is sent from the police car to a control unit in the speeding car to bring it to a halt. However the client is aware of a patent directed to such a system and wishes to challenge its validity.
- The patent has a filing date of 1 January 2005 and a priority date of 2 January 2004. There are no numbered references in the discussion of prior art in the patent. Also the examining Patent Office could find only background documents which you‘ve checked and confirm are not citable against novelty or inventive step.

The claims of the patent read:

- 1. A system for use in stopping a speeding vehicle wherein in operation a transmitter is used to for send a stop signal to the speeding vehicle, a receiver in the vehicle detects the stop signal and a control unit responds to such detection to cut off the vehicle's fuel supply and/ or ignition.
- 2. A control system as claimed in claim 1 in which the control unit also operates an indicator device to provide a warning that the vehicle is about to stop.
- 3. A control system as claimed in claim 2 in which the indicator device is a flashing light.
- 4. A control system as claimed in any preceding claim in which the transmitter also send a signal to a police station to alert personnel there.

Preliminary steps – IPC; keywords

- *IPC* - difficult to find an appropriate one
- *Keywords* -some immediate possibilities include *police, speed, vehicle, transmitter, receiver, control unit, stop signal, cut, fuel supply, ignition*
  - Although not in claim 1, *police* looks to be an essential term, since it's unlikely that any other agency would be authorised to operate this system (possible synonym *law enforcement)*
  - *Speed* is likely to be mentioned
  - *Vehicle* looks essential but too narrow – maybe use *vehicle or car or truck or lorry*
  - *Transmitter, receiver, control* all look to be terms which are likely to be used so widely and to have so many synonyms as not to be useful
  - As claimed, fuel supply and ignition are cut off – maybe try *fuel or ignition* with the more general term *disable*
  - So start with *police and speed and (vehicle or car or truck or lorry) and (fuel or ignition or disable)*

Full text search in *Patentscope*

- Results ....1,280 for Criteria: police and speed and (vehicle or car or truck or lorry) and (fuel or ignition or disable)

IPC revisited

- Sub-classes G06F and B60R are by far the most common International Classification sub-classes used amongst the hits
- An online check shows that G06F is entitled *Digital Data Processing.* This sub-class is concerned with the detail of data handling., which is not the invention here.
- B60R is entitled *Vehicles, Vehicle fittings or vehicle parts, not otherwise provided for.* Again this looks to be at the wrong level of organisation; it is concerned with details rather than systems

Narrowing the search

- How can we get at the system concept – *transmit and receive* would include operations within a vehicle as well as between two vehicles. Therefore try including *remote.*

- Results ... 922 for Criteria:police and speed and (vehicle or car or truck or lorry) and (fuel or ignition or disable) and remote

Eliminating false drops

- A quick inspection of the hits indicates that we are picking up patents related to effecting communication between vehicles and to patents relating to the use of devices thrown by police in front of speeding vehicles to puncture the tyres (stingers)
- Therefore try including *andnot communicate* [slightly risky] *andnot puncture*
- Results ....49 for Criteria: police and speed and (vehicle or car or truck or lorry) and (fuel or ignition or disable) and remote andnot communicate andnot puncture
- [[B60R still favourite IPC at 9]]

Best hit is WO/2005/091882 (Dunand)

- 26. WO/2005/091882 -VEHICLE STOPPER SYSTEM 06.10.2005
- G05B 19/00 PCT/US2005/006115
- DUNAND, Robert Andre DUNAND, Robert Andre
- A remote control system for reducing the speed of at least one vehicle in an activation radius comprising a remote device for transmitting a wave coded signal and a receiver which is located in all vehicles. The remote device, when properly activated, transmits a wave coded signal to the receivers in all vehicles within a pre-determined radius of the remote device. Once the 'Reduce Speed' signal is received, the vehicles are first slowed to a speed of 5-10 mph, and, if the vehicle sought after has not stopped and if it is safe to do so, then if the 'Stop' signal is received, the speed of all of the vehicles in the activation radius is further reduced such that the vehicles are stopped or immobilized. In a further improvement of this invention, all vehicles also have a transmitter which identifies the vehicle and enables selective immobilization of vehicles.

Extract from description in Dunand

- If the police officer (or other law enforcement agent) presses a second button ("Stop" button) on the Remote Vehicle Stopper 10, the system cuts the fuel supply or ignition of all civilian vehicles within the activation radius and the speed of the vehicles is reduced such that the vehicles are stopped or immobilized

But ....

- Looks very promising, however – but check dates!
- Nevertheless, also check IPC, search report and description of prior art

IPC

- Also look at IPC term assigned to Dunand, namely G05B19/00,*Programme- control systems (specific applications, see the relevant places ..)*

- Again does not appear to a good fit

International Search Report – documents cited against Dunand

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,411,887 B1 (MARTENS et al.) 25 June 2002, col. 4, lines 31-61; col. 6, lines 34-41.	1-6, 8-34
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Y		7, 9, 20
Y	US 4,660,528 (BUCK) 28 April 1987, col. 2, line 66-col. 3, line 2, col. 3, lines 25-30.	7, 9
Y	US 4,878,050 (KELLEY) 31 October 1989, col. 6, lines 19-45.	20
A	US 5,861,799 A (SZWED) 19 January 1999, see entire document.	1-34

Description of prior art in Dunand

U.S. Patent No. 5,513,244 (Joao et al.) discloses a remote-controlled anti-theft or theft-deterrent system and method for motor vehicles for disabling a vehicle's ignition system, fuel pump system or auxiliary equipment system once it has been determined that the vehicle's ignition system is shut-off. This invention utilizes a transmitter and receiver system which allows for transmission of remote signals to a receiver over long distances.

- So check US 6411887, US 5513244, US4878050 and US4660528 on USPTO site

US 6411887 (June 25, 2002)

- Method and apparatus for remotely controlling motor vehicles

Abstract In the Police Chase Eliminator (PCEL), a targeted vehicle being pursued through traffic may be apprehended by .....The system for remotely controlling a targeted vehicle comprises a control unit which would normally be located in a police car and vehicle modules which are installed in motor vehicles. The control unit transmits activate commands to the vehicle modules which respond by either transmitting back a visual signal or an electronic signal. The control unit may also transmit control commands to the vehicle modules to control the operation of the vehicle. The activate control commands may include a vehicle "Find" command and/or a vehicle "Flash" command. ....

US5513244 (April 30 1996)

- Remote-controlled anti-theft, theft reporting, or vehicle recovery system and method for motor vehicles

Abstract A remote-controlled anti-theft or theft-deterrent system ..transmitting device ... capable of transmitting data signals to at least two remote locations, a first receiving device for receiving the data signals transmitted from the transmitting device at a first of the at least two remote locations, a second receiving device for receiving the data signals transmitted from the transmitting device at a second of the at least two remote locations, a first control device ..processes the ...data signals and issues one of a disable signal and a re-enable signal to one of a vehicle's ignition system, a vehicle's fuel pump system and a vehicle's auxiliary equipment system ...and a second control device ... processes the ..data signals and provides information indicating at least one of identification of the motor vehicle and information indicative of the function to be controlled by the data signals.

US4660528 (April 28 1987)

- Apparatus for remote termination of the operation of a selected motor vehicle

Abstract The invention is directed to an RF means for terminating the normal operation of a selected motor vehicle. A plurality of motor vehicles each have an RF receiver tuned to a frequency and EIA tones specific to their license plate indica. Selected other motor vehicles have an RF transmitter and EIA tone generator which can be selectively tuned to transmit a signal which is receivable by a selected one of the motor vehicle receivers and when received stops the operation of that selected vehicle by terminating the fuel supply or removing ignition voltage to the motor vehicles internal combustion engine.

US4878050 (October 31 1989)

- Motor vehicle remote control system

Abstract Motor vehicle control system for enabling persons in an authorized vehicle to control the movements of one or several general vehicles. The system includes a signal beam transmitter at the authorized vehicle, which can be directed in any direction by beam directing apparatus toward a general vehicle having a beam signal receiver attached thereto. Upon receiving the beam, the general vehicle may be stopped, slowed down or stopped after a certain delay. The beam energy may be laser light, microwave, sound energy or any other suitable energy. The beam transmitter may be combined with a video receiver and a video monitor so that the person in the authorized vehicle can view the general vehicle. The beam may be modulated and encoded with messages that can be decoded in the general vehicle.

Search in USPTO

- Results of Search in US Patent Collection db for: ((((((police AND speed) AND (((vehicle OR car) OR truck) OR lorry)) AND ((fuel OR ignition) OR disable)) AND remote) ANDNOT communicate) ANDNOT puncture): **236 patents**

- including - US 6411887, US 5513244 and US4878050 (though not US4660528)

Search in PhilPat

- Request: police (in Abstract/Bibliographic field)
  63 document(s) retrieved – mainly relating to uniform designs. Three patents:
- 1 Title: PROBAT ON PEACE & ORDER PARAPHER COMPONENT GEAR BELT KIT Issue Date: Filing Date: 9/14/2005 Patent/Registration No. :12005000463 Publication Date: 7/23/2007 Inventor/Maker/Designer: FRANCISCO O . PAGAYON TEODORICO CASTANEDA Category: Invention
- 2 Title: DIAPHRAGM ACTIVATED MICRO-ELECTROMECHANICAL SWITCH Issue Date: Filing Date: 2/23/2005 Patent/Registration No. :12005500370 Publication Date: 3/7/2006 Inventor/Maker/Designer: CHRISTOPHER V. JAHNES JENNIFER L LUND KATHERINE L. SAENGER RICHARD P. VOLANT Category: Invention
- 3 Title: AN IMPROVED POLICE CLUB Issue Date: 8/25/1977 Filing Date: Patent/Registration No. :00000010723 Publication Date: Inventor/Maker/Designer: LOMRE T. LAURON Category: Invention

Reflections and conclusions on results

- Some excellent hits found
- However, should not have limited search to “speed”; should have included “theft” or “anti-theft”
- Perhaps could have included “transmit” and “receive” after all

- Next steps – carefully review hits and see if any claims remain unattacked and require further searching

Case study 3 – practical exercise

- Your client is an attorney representing a manufacturer of power tools. One of his products is an electric drill incorporating a spirit level
- The manufacturer has received correspondence from an attorney to the effect that he is infringing a patent directed to such an arrangement. The manufacturer‘s attorney wishes to challenge the validity of the patent.
- The patent has a filing date of 1 January 2005 and a priority date of 2 January 2004. There are no numbered references in the discussion of prior art in the patent. Also the examining Patent Office could find only background documents which you‘ve checked and confirm are not citable against novelty or inventive step.

The claims of the patent read:

- 1. A power tool incorporating an integral spirit level
- 2. A tool as claimed in claim 1 in which the tool is an electric drill

Some initial questions

- What use would a document be that described a **hand** drill incorporating a spirit level?
- Should we start by searching tools in general (claim 1) or go straight for the preferred embodiment (claim 2)?
- Search *Patentscope* and *PhilPat* – and *Espacenet* if time

What we've discussed

- What is a validity or invalidity search
- Starting points
  - Known prior art
  - Prior art published anywhere
  - Prior art published in an application made in the Philippines
  - The concepts of novelty and inventive step
- Case study 1 - novelty and inventive step
- Case study 2 – identifying keywords, eliminating false drops, checking dates
- Case study 3 - ?????