



Mock Certification Exam for
Patent Information Professionals 2011

PATENT INFORMATION ANALYSIS MOCK CERTIFICATION EXAMINATION

Paper A

Engineering sample answer for Patent infringement

Please note: it is to be understood that the sample answers provided in this document are intended to serve as a guide and by no means represent definitive answers. It is entirely possible that additional answers not specifically disclosed in this document could be considered as satisfactory answers.



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Sample Answers for Paper A Engineering Patent Infringement

Question 2

A client contacts you regarding a new project for developing an optical rain sensor with Fresnel lens structure which controls a windscreen wiper system. He informs you that he wants to sell this product to car manufacturers in the US and Germany. The client does not want to infringe patents of third parties.

Please perform a patent search and describe the necessary steps for a freedom-to-operate search.

Expected answers

When constructing the exam questions we wanted to receive both a working strategy to a solution and most of all your reasons for doing things a certain way in order to better assess your knowledge of search types, databases, search tools and strategic planning. We did not always succeed in getting sufficient comments in the answers (e.g. the reasons for choice of database), most probably owing to participants not having had a model of what was expected.

The following gives an overview of a possible course of action. Most of the examples are taken from the actual exams (in Times New Roman, black), with our annotations in Nimbus Sans L, blue. It tries to exemplify a promising strategy i.e. examples of how the team thought the searches should have been constructed and commented.

1. General Preparation:

Firstly if you did not know what a Fresnel lens is, a good starting point would be to check either patents having the word in the title or even more conveniently to look it up on Wikipedia. You would need to find out about the rain sensor system, how it controls a windscreen wiper system and what an optical sensor with Fresnel lens structure looks like.



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2. Type of search / search concept

Examples from examinee's answers:

A freedom to operate search takes two parts: first, find the relevant patents; second, search the claims for the invention.

Given that there are only search terms and two countries involved, a profile of subject terms and class codes has to be developed.

The focus on granted patents, pending applications, time frames to be searched and choice of country should have been gone into more deeply here. As patents in this area are unlikely to be pending for the countries of interest beyond the 20 years from filing, searches may be restricted to pending and granted patent documents for the countries of interest (i.e. Germany and US or where Germany/US may be designated in an EP or WO patent) filed in the last 20 years or published in the last 21 years (to be on the safe side for parallel national and regional applications) for the countries of interest

Additional considerations from another paper:

The search should be limited to Germany and US.

Also EP and WO documents will be searched as they may enter into national phase in DE and US.

...

The client should be asked if they are also interested in knowing about patent documents in the countries where the product is manufactured.

The point on the EP and WO documents is particularly important. It is also useful to know if there were additional considerations that were not covered by the request, e.g. the clarification on where the product may be manufactured would need to be considered.



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3. Choice of database

An explanation of the databases chosen e.g. considering the time constraints of the exam, one would benefit from a database that gives you easy access to the claims of your hits. Again this does of course not preclude other databases from being used - other reasoning is possible and valid for e.g. value-added abstracting databases: controlled vocabulary, superior classification, English language abstracts of foreign publications, etc.

4. Finding relevant classification

Examples from an actual exam:

As I am not familiar with classifications in the automotive suppliers technology, I go on the EPO search module, searching European classification, typing "windscreen" under menu of "finding classification for keyword" and get the result of hits : first of them is "**Cleaning of vehicles** (by apparatus not integral with vehicle B60S3/00; cleaning in general B08B.... etc) **B60S1**"

clicking on the given classification and scrolling further through the classification, I find out a class forwith "optical rain sensor" **B60S1/08F2D**

Or from another:

Look for relevant classes using either a narrow search in PatBase and looking at the different homepages describing patent classes.

IPC classes:

B60S1/* Cleaning of vehicles
B60S1/04 Wipers or the like, e.g. scrapers (to B60S1/44)
G01W1/* Meteorology
G01W1/14 Rainfall or precipitation gauges
H01L31/0232 Optical elements or arrangements associated with the device

US classes:

318/DIG2 WINDSHIELD WIPER CONTROLS (or 318/DIG.2)
15/250* Optical-member-attachable cleaner (e.g., windshield wiper)
73/170.16 METEOROLOGY
73/170.17 Precipitation (e.g., rain gauge)
250/216 Optical or pre-photocell system

F term:

2G089* METEOROLOGY
5F089* PHOTO-COUPPLERS OR INTERRUPTERS



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To find relevant US-classes for windshield wipers, an additional search was included focusing on US documents describing wipers in title

Other options would be to include classes from other systems like F-terms or Derwent MC with an explanation of why they were chosen

IPC:

B60S0001-08 .. electrically driven (cleaning windscreens, wipers)
G01W001-14 Rainfall or precipitation gauges
G01J0001-04 .. Optical or mechanical part (photometry)
G01N0021-55 Specular reflectivity
G02B0003-08 Fresnel lens

ECLA

B60S1/08F2D Optical rain sensor] [N0905]
B60S1/08F2D2 [N: with a particular arrangement of the optical elements] [N0905]

Derwent Manual Codes

X22-X06E/MC RAIN OR MOISTURE SENSOR
S03-D02B1/MC DETECTING PRESENCE OF RAIN, SNOW OR ICE FOR
NON-METEOROLOGICAL APPLICATION

DEKLA

B60S 1/08 K Feuchtefühler

USCL

250227240 With coupling enhancement means



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5. Keywords and concepts

Once the concepts are defined any synonyms and classes should be exemplified.

Here are two examples of keyword choice / concepts from examinee's answers:

Elements	Rain sensor	Fresnel lens/optical lens	Windscreen wiper system		
Keywords	(Rain sensor%) or (rain sensing) or (rain detect*) or regensensor*	Fresnel or Fresnellinse*	WINDSHIELD % or WINDSCREE N% or (WIND SHIELD%) or (WIND SCREEN%) or (window pane%) or Frontscheibe* or Windschutzscheibe* or scheibe*		
International class					
European class	B60S1/08F/low In particular B60S1/08F2D/low	G02B3/08			
US class					
JCT					

Or:

Relevant English Search Terms			
Optical	Rain/raindrop	Sensor	Fresnel
Light	Water	Detector	Lens
Electromagnetic	Moisture	Monitor	Segmented lens
Optoelectronic	Wet		Collimator
		Rainsensor	
Windscreen	Wiper		
Wind pane	Scraper		
Car			
Vehicle			

Relevant German Search Terms			
Optisch	Regen/tropfen	Sensorvorrichtung	Fresnel-Prismen
Lichtmenge	Wasser	Regensensor	Linse
Optoelektronisch	Feuchtigkeit	Detektion	



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Windschutzscheibe			
Windschutzglass	Scheibenwischer		
Kraftfahrzeug			

Since Germany is one of the targeted countries, it is especially important to also find German keywords. Even if you are not familiar with the German language you should nevertheless know about dictionary / translation sites/looking at EPB claims on the internet to help you with tasks like this. Or as one examinee puts it:

Since the client is particularly interested in Germany it is crucial to find German synonyms. This is done by the use of dictionaries and by the use of patent-documents having both English and German text.

A list of possible keywords:

Rain, moisture, precipitation, wet

sens, detect

fresnel (lens, prism, structure)

windscreen, windshield

Regensensor, optische Sensoreinrichtung, Fresnel

Windschutzscheibe

6. An annotated search history

Here are two sample examples from the exams

Set	Items	Description
S1	9745	FRESNEL?
S2	176450	RAIN? OR PRECIPITATION OR IC=G01W-0001/14
S3	52117	WIPER? OR WINDSCREEN? OR WINDSHIELD? OR IC=B60S-0001/14
S4	12	S1 AND S2 AND S3
S5	88748	(RAIN? OR REGEN?)/CM
S6	3461	FRESNEL?/CM
S7	5	S5 AND S4
S8	5	S6 AND S7
S9	2	PN=(US 7804055 OR JP 2010141296 OR EP 2196793 OR US 20100147067)
S10	2	S8 AND S9



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Better still is an annotated version which explains choices

#	Search query	Results	Comments
25	24 and PRD>19900101	7	Relevant documents found at this point of the search, with priority date after 1 st of January 1990.
24	RF=(Question 2 Paper A)	7	Relevant documents found at this point of the search.
23	22 and (9 or 10)	79	#23 combined with sensor or Fresnel (full text)
22	pa=(trw automotive)	1971	Relevant Patent applicant
21	(ctb 20) or (ctf 20)	100	Citations on #21 LOOK THROUGH
20	RF=(Question 2 Paper A)	6	Relevant documents found at this point of the search.
19	9 and 11 and 15	219	Sensor and windscreen wipers (full text) meteorology (classes) LOOK THROUGH
18	12 and 13 and 14	16	Rain (full text) combined with windscreen wipers and optical sensor (classes) LOOK THROUGH
17	10 and 14	942	Fresnel (full text) combined with with windscreen wipers (classes) LOOK THROUGH
16	9 and 14	579	Sensor (full text) combined with windscreen wipers (classes) LOOK THROUGH
15	sc=(G01W1/14) or uc=(73/170.17) or jct=(2G089*)	5492	
14	sc=(B60S1/*) or uc=(318/DIG2 or 15/250*)	47699	
13	sc=(H01L31/0232 or H01L31/0232) or uc=(250/216) or jct=(5F089*)	14594	
12	ft=(Rain* or moistur* or water* or wet* or humid*)	more than 100,000	
11	ft=(Windscreen* or windshield* or wiper%)	more than 100,000	
10	ft=(Fresnel* or lens or lenses)	more than 100,000	



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#	Search query	Results	Comments
<u>9</u>	ft=((sens* or detect*) w2 (optic* or photo*))	more than 100,000	
<u>8</u>	(ctb 7) or (ctf 7)	64	Citations on #7 LOOK THROUGH
<u>7</u>	RF=(Question 2 Paper A)	2	Relevant documents found at this point of the search.
<u>6</u>	ti=(wiper% and windscreen) and cc=US	827	Search to find US classes for windscreen wipers
<u>5</u>	tac=((((wiper%) w2 (windscreen% or windshield%)) and fresnel and sensor)	2	Narrow preliminary search LOOK THROUGH
<u>4</u>	pa=mercedes and tac=(wiper%)	57	Large car company that could have relevant patents. LOOK THROUGH
<u>3</u>	pa=ford and tac=(wiper%)	186	Large car company that could have relevant patents. LOOK THROUGH
<u>2</u>	pa=bmw and tac=(wiper%)	3	Large car company that could have relevant patents. LOOK THROUGH
<u>1</u>	pa=(hydreon)	0	Company found on the internet.

Modular histories with few keywords / classes per query line are preferred because they give more flexibility and help avoid misspellings / miscopying. Annotations or explanations of the reasoning behind a certain strategy allow some insight into the thought process behind the strategy (e.g. use of truncation, proximity and combinations of search terms). As there is no right or wrong way to carry out a search, it is important to explain why something was carried out in a particular way. This is not to say that the exemplified histories are the best one can come up with but they show different ways to reach a goal, although the first one not only lacks cut-off dates and publication country restrictions but also explanations.

9. Documents possibly found:

This was not required by the exam but it was used as a check.....

US7894054B2



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US7894054B2

DE102008023845A1

US8082783B2

DE102008033204A1

US7894054B2

DE102008020171B4

DE102007039349A1

DE102007036492B4

US20070235638A1

DE19830120B4

Additional information on legal status e.g. whether a document is pending or in force and how to find out this kind of information should be mentioned even if it was not required to give a list of documents.