

Overview

- Role of the patent system
- Which information can be obtained from a patent?
- How can we use this information?
- Examples of using patent information
- WIPO activities

The Patent System

- **Protection:** Reward investments made in developing a new invention
- **Disclosure:** Publish and make known technical information of a new invention

→ Innovation and economic growth

Nature of patent information

- Patent protection is **territorial** in nature
- Patent information is **global**
- Patent protection is **time-limited**
- Patent information remains **permanently available**
- Patent protection is limited in scope by **claims**
- Patent information includes **all information** contained in patent documents

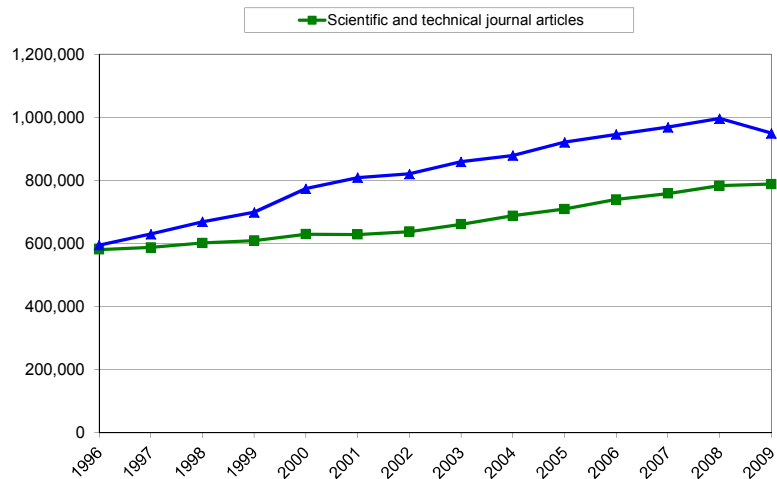
Nature of patent information (cont'd)

- Patents give their owners a right to prevent others from carrying out the invention (making, using, selling, offering for sale, importing)
- Patents do not prevent others from learning from the invention

Patents: A unique source of information

- Technical information never published elsewhere
- 80+ million patent documents published to date
2+ million new patent applications published in 2011
- Highly standardized format

New technical information worldwide



Source: WIPO Statistical Database (patent families);
World Bank, World Development Indicators (journals)



Uses of patent information

- Legal
- Technical
- Business
- Policy



Users of patent information

- Individual inventors
- Academic institutions
- Research institutions
- Small and medium enterprises (SMEs)
- Industry
- Government agencies
- Patent attorneys
- and many others...

Uses of patent information: Legal

- Determine the patentability of your inventions
- Draft strong patent applications
- Determine the validity of existing patents and which technologies belong to the public domain
- Avoid patent infringement

Patentability

- Novelty
- Inventive step, or non-obviousness
- Industrial applicability, or utility
- Patentable subject matter

Scenario

- A manufacturer of wind turbines would like to identify new technologies to incorporate into its products.
- The manufacturer would also like to know whether these technologies can be exploited freely, or whether licenses must be obtained from patent holders.
 - avoid patent infringement



Photo source: Pavel Ševela / Wikimedia Commons

Wind power: Accessing patent information

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Int. Classification(IPC) F03D Office: All Search

- Search in technical information
→ classification: F03D (“wind motors”)

Wind power: Record

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WIPO PATENTSCOPE

Latest bibliographic data on file with the International Bureau

Pub. No. WO/2011/020001 International Application No.: PCT/JP2010/022008
 Application Date: 22.05.2011 International Filing Date: 22.05.2011
 Creator / Inventor Filed: 18.07.2011

IPC: F03D F03D (2006.01), F03C F03C (2006.01), F03C F03C (2006.01)

Applicant: NISSAN, Aiyu (CN); (CN)
 Inventors: NISSAN, Aiyu (CN)

Agent: BERNHARD, Barbara, Eisenfurt, Spynal & Partner Rechtsanwälte 20 2010 Bremen (DE)

Priority Date: 10.03.2010 DE

Title: (EN) LAGERUNG EINES VERSTELLBAREN ROTORBLATTES EINER WINDENERGIEANLAGE
 (DE) BEARINGS FOR AN ADJUSTABLE ROTOR BLADE ON A WIND ENERGY PLANT
 (FR) PALIER POUR UNE PÂLE DE ROTOR REGULABLE D'UNE SCHEMIE

Abstract: (DE) Die Lagerung eines verstellbaren Rotorblattes an der Rotornabe sind Windenergieanlage ist als Dreierlager-Schwenklager ein Merkmal für die Übertragung hoher Antriebskräfte und großer Biegemomente bei geringen Reibungsverlusten zwischen den Lagergehäusen. Es besteht aus einer zwei Rollen umfassenden Halbbreite Paare von Halbkugeln fernschlüssig aufeinander Lagerung für den einen Lagergehäuse und einem dabei im Querschnitt U-förmig angeordneten Lagerung für den anderen Lagergehäuse. Die Lagerung für das eine Lagergehäuse ist eine Rollbahn, die besteht aus zwei Pfannen (7a, 7b) mit unterschiedlichen Querschnitten, die unterschiedlich variabel als Halbkugeln (7) befestigt sind. Die einseitige Fläche des rechten Pfannens (7a) ist in zwei, sich kreuzen (2a, 2b) gebildet und jede Teilfläche ist an einem der beiden Pfannen (7a, 7b) als eine Lagerungsbahn.

(EN) The invention relates to the bearing for an adjustable rotor blade of

Wind power: National phase entries

T. (W02001890681) BEARING FOR AN ADJUSTABLE ROTOR BLADE ON A WIND ENERGY PLANT

[Pat. Bibliogr. Data](#)
[Description](#)
[Claims](#)
[National Phase](#)
[Abstract](#)
[Drawings](#)

Available information on National Phase entries (more information)

Office	Entry Date	National Number	National Status
Australia	02.09.2002	2001235488	Granted: 21.10.2004
Canada	04.05.2002	2452944	
European Patent Office (EPO)	28.09.2002	2001807502	Published: 18.12.2002 Granted: 11.09.2004
Japan	18.09.2002	2001867934	
Republic of Korea	08.09.2002	102002731100	Published: 05.12.2002 Granted: 13.07.2007
New Zealand	12.09.2002	521333	Published: 28.10.2006 Granted: 09.02.2008
United States of America	17.12.2002	10220980	
South Africa	02.09.2002	200207603	
South Africa	02.09.2002	200207603	

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Wind power: Legal status (AU)

2001235488 : Bearing for an adjustable rotor blade on a wind energy plant

[Bibliographic data](#)
[Specification/e-Register](#)
[Dossier](#)
[Lifecycle details](#)
[Fee/Publication history](#)
[Continuation/Renewal fee history](#)

Date paid	2013-02-18	Paid to date	2014-02-22	Next fee due	13	Fee Table
Last agency address						
Publication history						
Ownership details						
Oppositions, Disputes & Amendments						

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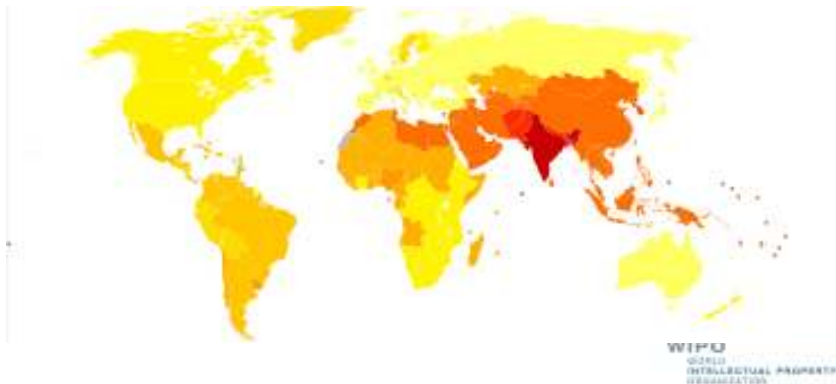
Uses of patent information: Technical

- Develop new solutions to technical challenges faced in the country, or adapt existing technologies to suit local conditions
- Target research resources more effectively (avoid “reinventing the wheel”)
- Technical information must be sufficiently clear and comprehensive to be carried out by a typical expert in the field of technology (“a person having ordinary skill in the art”)

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Scenario

- A research laboratory aims to develop new vaccines against poliovirus and would like to know what has already been done in this area of research.



Vaccines against poliovirus: Accessing patent information

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Int. Classification(IPC) A61K 39/13 Office: All Search

- Search in technical information
 → classification: A61K 39/13 (“Medicinal preparations containing antigens or antibodies – Poliovirus”)

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Vaccines against poliovirus: Record

1. (W02009/111849) METHOD FOR STABILIZED VACCINE PRODUCTION

PCT Work Data Description Claims National Phase Actions Documents

Latest bibliographic data on file with the International Bureau

Pub. No.:	WO/2009/111849	International Application No.:	PCT/BR2009/000098
Publication Date:	17.09.2009	International Filing Date:	10.03.2009
IPC:	A61K 39/13 (2006.01); A61K 39/125 (2006.01)		
Applicants:	UNIVERSIDADE FEDERAL DO RIO DE JANEIRO - UFRJ (BR/BR); Av. Brigades Trompowski, s/n°, Cidade Universitária, 21044-020 Ilha do Governador, Rio de Janeiro - RJ (BR) (For All Designated States Except US) GASPARI, Luciane Pinho (BR/BR); (BR) (For US Only) FREDER, Marcelo da Silva (BR/BR); (BR) (For US Only) DE OLIVEIRA, Andreia Chebe (BR/BR); (BR) (For US Only) DA SILVA, Jerson Lima (BR/BR); (BR) (For US Only)		
Inventors:	GASPARI, Luciane Pinho; (BR) FREDER, Marcelo da Silva; (BR) DE OLIVEIRA, Andreia Chebe; (BR) DA SILVA, Jerson Lima; (BR)		
Agents:	ATEM E REMER ASSESSORIA E CONSULTORIA DE PROPRIEDADE INTELECTUAL LTDA.; Praça Fozinho, 19/20° andar, 20031-020 Grajaúns - Rio de Janeiro - RJ (BR)		
Priority Data:	P1 0800257-2 10.03.2008 BR		
Title:	(EN) METHOD FOR STABILIZED VACCINE PRODUCTION (FR) PROCÉDÉ POUR LA PRODUCTION DE VACCIN STABILISÉ		

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Vaccines against poliovirus: Documents

1. METHOD FOR STABILIZED VACCINE PRODUCTION

Date	Title	Year	Document
14.05.2012	International Application Filed	2012	PCT/JP2012/05516
14.05.2012	International Application Filed	2012	PCT/JP2012/05516
14.05.2012	International Application Filed	2012	PCT/JP2012/05516
08.07.2012	News Release by the Japanese Patent Office	2012	JP-P-2012-05516
08.07.2012	News Release by the Japanese Patent Office	2012	JP-P-2012-05516
17.02.2013	Application Filed in Japan	2013	JP-P-2013-05516
17.02.2013	Application Filed in Japan	2013	JP-P-2013-05516
17.02.2013	Application Filed in Japan	2013	JP-P-2013-05516
17.02.2013	Application Filed in Japan	2013	JP-P-2013-05516
17.02.2013	Application Filed in Japan	2013	JP-P-2013-05516
17.02.2013	Application Filed in Japan	2013	JP-P-2013-05516
17.02.2013	Application Filed in Japan	2013	JP-P-2013-05516
17.02.2013	Application Filed in Japan	2013	JP-P-2013-05516
17.02.2013	Application Filed in Japan	2013	JP-P-2013-05516
17.02.2013	Application Filed in Japan	2013	JP-P-2013-05516

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Vaccines against poliovirus: Technical data

Descriptive Report
METHOD FOR STABILIZED VACCINE PRODUCTION

FIELD OF THE INVENTION
The present invention relates to vaccines field, more particularly, to stabilization of three Polio vaccine strains, present in oral vaccine against Poliomyelitis (OPV).

BACKGROUND OF THE INVENTION
The Poliomyelitis is an acute infection that may manifest as a non-apparent infection, aseptic meningitis or a classic case of flaccid paralysis. The transmission can occur from person to person through fecal-oral and oral-oral interaction. It is caused by a virus that belongs to genus, Enterovirus, family Picornaviridae, which has three serotypes: serotype 1, serotype 2 and serotype 3.
According to World Health Organization (WHO), the OPV is considered the single vaccine which is able to make the global eradication of Polio, being recommended for nations with low indexes of coverage and heterogeneous vaccination.
There are two vaccine types against Poliomyelitis available in the market: Sabin (oral, containing attenuated virus) and Salk (injectable, containing attenuated virus). In general, these vaccines contain a mixture of three polioviruses in order to confer immunity against all three serotypes.
The OPV containing the Sabin strains is a vaccine unstable to heat, therefore, must be stored frozen (-20 °C) and used immediately after thawing, to ensure effective immunization against polio.
The patent US 5.618.539 describes stabilized viral vaccines, particularly against polio, comprising an aqueous solution of live virus and a stabilizing compound, which has at least two amino or imino groups, such as basic amino acids (eg lysine, arginine etc.). This patent mentions also that the stabilizing compound allows a thermal stability increase of the virus in relation to stabilized

Table 1 - High hydrostatic pressure effect (310 MPa) in three poliovirus attenuated strains.

Virus Serotype	Temperature °C	Presentation time (h)	Virus Titer before presentation at 310 MPa (TCID50/mL) (log ₁₀)	Virus Titer after presentation at 310 MPa (TCID50/mL) (log ₁₀)	t Student Test
Poliovirus Serotype 1	37	0	7.21±0.27	7.65±0.12	0.84
		66	8.12±0.20	8.11±0.32	0.94
	-10	0	8.50±0.50	8.50±0.50	0.20
		66	8.02±0.11	8.30±0.38	0.38
	37	0	7.64±0.03	7.64±0.04	1
		66	8.13±0.21	7.89±0.05	0.49
Poliovirus Serotype 2	-10	0	8.15±0.35	8.15±0.23	0.94
		66	8.20±0.14	8.37±0.37	0.60
Poliovirus Serotype 3	37	0	7.91±0.17	7.85±0.04	0.84
		66	8.26±0.23	8.60±0.21	0.38
Poliovirus Serotype 3	-10	0	8.75±0.42	8.81±0.12	0.43
		66	8.25±0.05	8.60±0.03	0.42

Legend: MOI 10 (filled circles), MOI 1.0 (filled squares), MOI 0.1 (open triangles)

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Uses of patent information: Business and policy

- Track research activities of competitors
- Identify opportunity for licensing and joint ventures
- Review trends in specific areas of technology

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Scenario

- The manufacturer of wind turbines would like to identify its major competitors and potential partners to develop new technologies and products.



Photo source: W.Wacker (Wikimedia)

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Wind power: Accessing patent information

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Int. Classification(IPC) F03D Office: All Search

- Search in technical information
→ classification: F03D (“wind motors”)

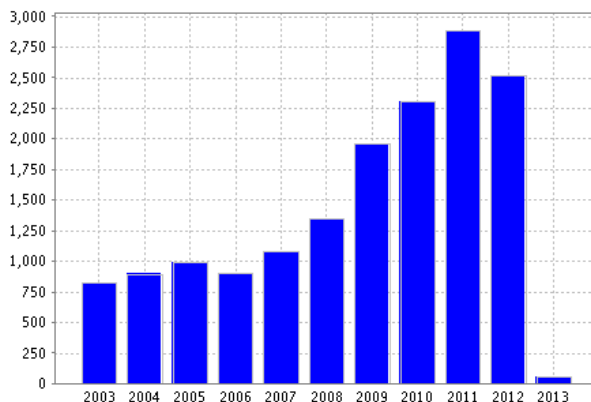
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Analysis

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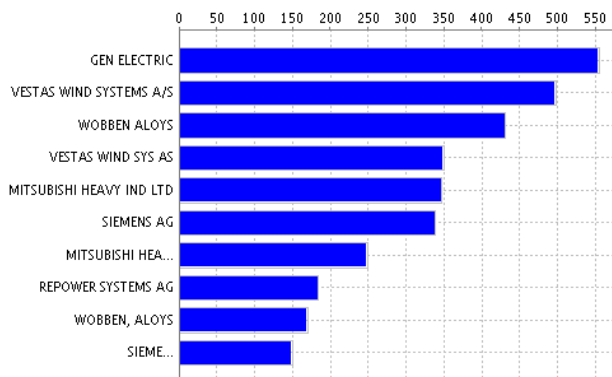
Countries		Main IPC		Main Applicant		Main Inventor		Pub Date	
Name	No	Name	No	Name	No	Name	No	Date	No
PCT	5003	F03D	15226	GEN ELECTRIC	554	WOB BEN ALOYS	415	2003	827
European Patent Office	4385	F03B	481	VESTAS WIND SYSTEMS A/S	497	アロイス・ゾーベン	136	2004	900
Japan	4133	E04H	227	WOB BEN ALOYS	431	WOB BEN, Aloys	125	2005	996
Republic of Korea	2223	H02K	188	VESTAS WIND SYS AS	349	WOB BEN, ALOYS	124	2006	906
Spain	1449	H02P	176	MITSUBISHI HEAVY IND LTD	347	WOB BEN, ALOYS	124	2007	1079
Brazil	585	H02J	172	SIEMENS AG	338	STIESDAL HENRIK	74	2008	1346
Russian Federation	488	F16C	158	MITSUBISHI HEAVY INDUSTRIES, LTD.	248	WON, IN HO	70	2009	1964
Argentina	266	B63B	138	REPOWER SYSTEMS AG	184	YOSHIDA SHIGEO	70	2010	2311
Mexico	254	F16H	121	WOB BEN, ALOYS	169	SUZUKI MASAHIKO	58	2011	2688
South Africa	133	B29C	114	SIEMENS AKTIENGESELLSCHAFT	149	ALOYS WOB BEN	40	2012	2523
Morocco	65							2013	59

Wind power: Filing trends



- How is this technology evolving over time?

Wind power: Top applicants



- Who is particularly active in this field of technology?
- From whom can I seek licenses, or with whom can I negotiate partnerships?

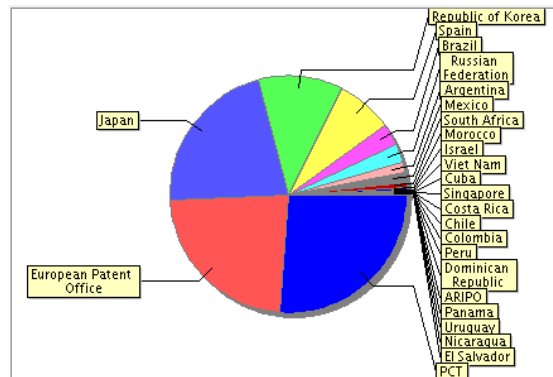
Wind power: Top applicants



- How is the patenting activity of top applicants evolving over time?

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Wind power: Top offices of filing



- With which offices do applicants tend to file their patent applications in this field of technology?

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Scenario

- A consumer electronics company would like to find out more about the research and development activities of its secretive competitor.

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Competitor intelligence: Accessing patent information

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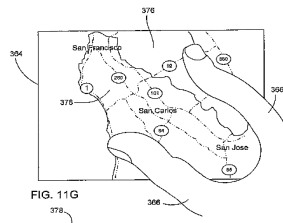
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Names apple computer Office: All Search

- Search in applicant data
→ applicant name: Apple Computer

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Competitor intelligence: Patent application



- PCT application: WO 2006/020305 (“Gestures for Touch-Sensitive Input Devices”)
- Published: February 2006

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Competitor intelligence: Product



- Apple Computer's iPhone
- Released: January 2007

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