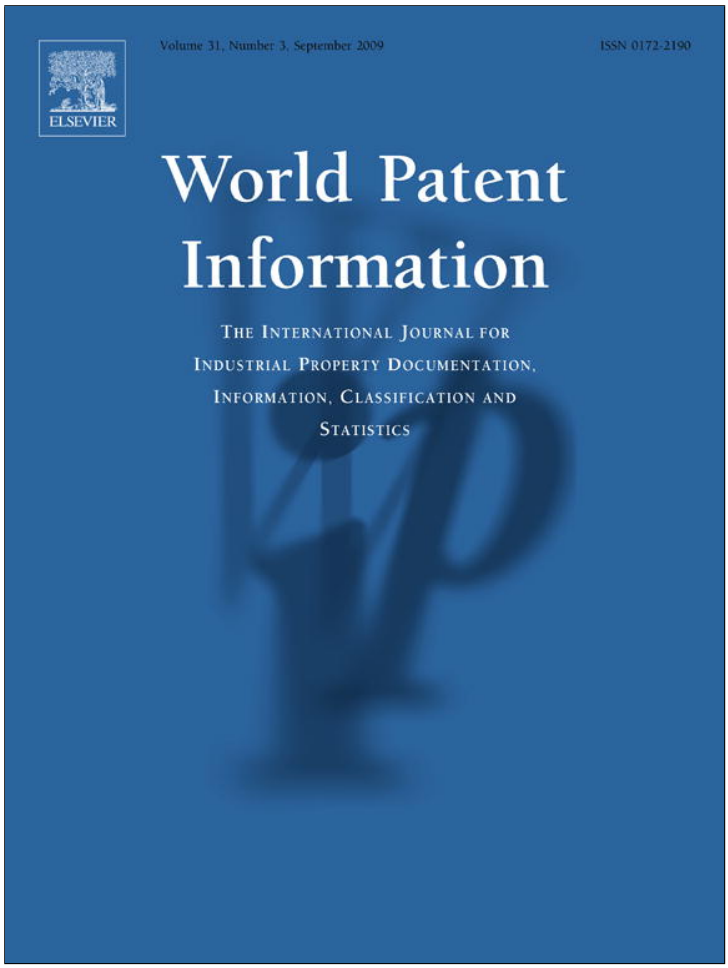

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Patents as technological information in Latin America

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ABSTRACT

This study shows the importance of patents as a source of technological information in Latin America. We studied the industrial property offices' websites and the kind of patent information available such as laws, gazette, statistics, cost, forms, and contacts. We found at the USPTO and PCT websites the quantity of patent applications from applicants in Latin American countries filed in these offices. Brazil and Mexico in particular provide information on their websites to anyone interested in filing patent applications, searching patents and using patents as a source of technological information. This work shows that the quantity of patent applications is only slowly increasing in Latin America. Thus, each one of the 21 countries of Latin America needs to have a policy of dissemination of the importance of the patent system as a source of technological information to increase research and innovation in their countries.

1. Introduction

Patents contain technological information that is often not available in another document. Therefore, they are an important information source to disseminate science and technology information [1].

We can also use patents as an indicator to show the technological development of a country but to do that we need to search the information at the patent data bases that the industrial property offices provide.

We can appreciate the importance of patents through the information available at each industrial property office, but we need to know the tools available in each one to recover the patent documents.

Patent information can be used as technological, legal and business information. In general, we can find patent information from around the world for patents applied for in the last 30 years [2], and in many cases much earlier patent specifications too.

The patent technical information is important for the persons who work in research and development because they need to know the state of the art "to not reinvent the wheel" and also to find patent documents relevant to a new product, process or device development.

A patent confers on its applicant or assignee the right to prevent third parties from manufacturing, using, offering for sale, selling or importing for such purposes without his consent a product that is the subject of a patent, so interested persons need to know the patent status. So, they need to know if the patent was granted or expired and if the patent fees were paid.

Patent information is very important to the policymaker but it is necessary to collect and analyze a large number of patent documents through tools, such as, a data mining, in order to make a decision. With these documents it will be possible to know about the merger and acquisition of companies through this type of study.

Herce [3] teaches that the patent information is very important to:

To improve the quality of your patent applications.
To determine the general state of the art.
To identify alternative technologies.
To identify owners of alternative or replacement technologies.
To locate technological and business information involving specific companies or individuals, such as applicants, assignees, patentees or inventors.
To study the novelty and inventive step of an invention.
To identify a member of a "patent family" which could be useful to:

- Find the countries in which a given patent application has been filed.
- Locate the document that is written in a desired language.
- Obtain a list of prior art documents or "References Cited".
- Estimate the importance of the invention by the number of patent documents filed.

To obtain information on the validity (status) of a published patent application or a granted patent.

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To avoid infringing other people's patent rights.

Certain aspects like the development and dissemination of patent information databases in MERCOSUR countries and Mexico have previously been described in this journal, between 1983 and 2005, by Barroso [4], Zárate [5], Castañeda [6], Treiguer [7], Rosenberg [8] and Urquidi [9]. The present work intends to provide the latest data about patents as technological information in Latin America.

2. The Latin American countries and patent information

Latin America includes all countries of the Americas who speak Spanish, Portuguese or French and other languages derived from Latin [10]. In this work we choose only the independent countries. Fig. 1 shows the map with the countries of Latin America.

Latin America is politically divided into 21 countries: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Uruguay and Venezuela.

Table 1 shows the Latin American countries population in 2007 [11]. So, we consider in this article all of these 21 countries in order to evaluate the patents information throughout Latin America.

2.1. Grouping of countries. Home pages and links

For purposes of this study, the Latin American countries were divided into 3 groups, the Group I (GI) has countries with over 100 million inhabitants (2 countries), Group II (GII) has between 10 and 100 million inhabitants (8 countries) and Group III (GIII) has below 10 million inhabitants (11 countries).

Generally, the patent office's homepages[1] provides links to the other offices. It is unusual to find a single homepage that list all the links of Latin America patent offices. Neither does the World Intellectual Patent Organization-WIPO list all the offices [12]. But, we found the site of Mineral Technology Center – CETEM [13] that provides several sites of patent offices, and we found all of the Latin American offices there. Table 2 shows the name and the sites of Latin America patent offices, except Haiti and Paraguay that do not have a homepage.

The homepage of Latipat provides a search in Latin American patent documents; more details about it are provided in Section 2.6 in this article.[2]

Now you know the name and the homepages of the patent offices, I would like to invite you to know the patent information that each one provides, in Sections 2.3–2.5, after studying Section 2.2 below.

2.2. The quantity of Latin American countries' patent application in the USA and WIPO

When we consult the homepage of the United States Patent and Trademark Office – USPTO [14] it is possible to know how many patent applications from Latin American countries were applied for in the USA. We consulted the USPTO because this information is available on the homepage.

Table 3 shows the quantity of Latin America patent applications filed in the USA from 2000 to 2007. The countries were grouped according to the distribution by groups defined above. Table 3 also contains the quantity of patent application of foreign countries and USA in USPTO.

Fig. 1. Map of Latin American countries.

Table 1
The population of the Latin America countries in 2007.

Country	Population	Country	Population
Argentina (GII)	40,301,927	Guatemala (GII)	12,728,111
Belize (GIII)	290,000	Haiti (GIII)	8,706,497
Bolívia (GIII)	9,119,152	Honduras (GIII)	7,483,763
Brazil (GI)	190,010,647	Mexico (GI)	108,700,891
Chile (GII)	16,284,741	Nicaragua (GIII)	5,675,356
Colômbia (GII)	44,379,598	Panama (GIII)	3,242,173
Costa Rica (GIII)	4,133,884	Paraguay (GIII)	6,669,086
Cuba (GII)	11,394,043	Peru (GII)	28,674,757
Dominican Republic (GIII)	9,365,818	Uruguay (GIII)	3,460,607
Ecuador (GII)	13,755,680	Venezuela (GII)	26,023,528
El Salvador (GIII)	6,948,073		
		Total: 517 046 405	

Source: internet world stats.

WIPO [15] statistics show the amount of patent applications that were from applicants in Latin American countries, that were requested under the PCT. The amount of Latin America patent applications in the period 2000/2007 is shown in Table 4. We included the total amount of patent applications at the PCT in Table 4 to compare with the number of Latin American patent applications.

2.3. Countries with 100 million inhabitants over – Group G1

Brazil and Mexico are the countries with over 100 million inhabitants.

2.3.1. Brazil

The National Institute of Industrial Property – INPI is the office responsible for Industrial Property in Brazil, including the granting of patents.

In recent years INPI has concentrated efforts to use the system of industrial property not only in their function of protecting intellectual property. All of the work of restructuring, undertaken since 2004, intends to use the system as a tool of empowerment and competitiveness, essential conditions to leverage the economic and technological development of the country [16].

The new Productive Development Policy of the Federal Government intends to "innovate and invest to sustain the growth" so the main objectives of the INPI are enabling entrepreneurs and inventors to use the industrial property system as a competitive intelligence source and promote a favorable business environment for innovation.

[1] The term 'patent office' is intended to describe the relevant government organization responsible for intellectual property matters.

[2] **Editor's note**: Further sources of information on the patent specifications of Latin American countries are the services provided by commercial providers, but these are outside the scope of this article.

Table 2
The name and homepages of Latin American patent offices.

Code	Country	Office/Site
AR	Argentina	Instituto Nacional de la Propiedad Industrial – INPI <http://www.inpi.gov.ar/>
BZ	Belize	Belize Intellectual Property Office – BELIPO <http://www.belipo.bz/>
BO	Bolivia	Servicio Nacional de Propiedad Intelectual – SENAPI <http://www.senapi.gov.bo/>
BR	Brazil	Instituto Nacional da Propriedade Industrial – INPI <http://www.inpi.gov.br/>
CL	Chile	Departamento de Propiedad Industrial – DPI <http://www.dpi.cl/>
CO	Colombia	Superintendência de Indústria e Comércio – SIC <http://www.sic.gov.co/>
CR	Costa Rica	Registro de Propiedad Industrial – RPI <http://www.registronacional.go.cr/>
CU	Cuba	Oficina Cubana de la Propiedad Industrial – OCPI <http://www.ocpi.cu/>
DO	Dominican Republic	Oficina Nacional de la Propiedad Industrial – ONAPI <http://www.onapi.gov.do/>
EC	Ecuador	Instituto Ecuatoriano de la Propiedad Intelectual <http://www.iepi.ec/>
SV	El Salvador	Centro Nacional de Registros – CNR <http://www.cnr.gob.sv/>
GT	Guatemala	Registro de Propiedad Intelectual – RPI <http://www.rpi.gob.gt/>
HN	Honduras	Dirección General de Propiedad Intelectual – DIGEPIH <http://www.geocities.com/pihonduras/>
MX	Mexico	Instituto Mexicano de la Propriedad Industrial – IMPI <http://www.impi.gob.mx>
NI	Nicaragua	Registro de la Propiedad Intelectual – RPI <http://www.rpi.gob.ni/>
PA	Panama	Sistema em línea de Propiedad Industrial <http://oasserver2.mici.gob.pa/>
PY	Paraguay	Dirección de la Propiedad Industrial in Paraguay <http://www.mic.gov.py/?option=com_content&task=view&id=2&Itemid=4/>
PE	Peru	Instituto Nacional de Defensa de la Competencia y de la Proteccíon de la Propriedad Intelectual <http://www.indecopi.gob.pe/>
UY	Uruguay	*Dirección Nacional de la Propiedad Industria – DNPII* <http://dnpi.gub.uy/sp/indice.htm/>
VE	Venezuela	Servicio Autónomo de la Propriedad Intelectual <http://www.sapi.gov.ve/>

The structure of INPI includes the Dissemination, Documentation and Information Technology Center (CEDIN) [17] that contributes with information technology access and disseminating the culture of intellectual property to the society.

The CEDIN manages an extraordinary information collection about development of technologies. Its services allow access to various information sources abroad, expanding the ability to search, with economy of resources. The Center provides information to companies, researchers and areas of government about technological sources and trends, monitoring research activities of companies and institutions in the country or abroad, determining the legal status and searching for the patent families. The team of CEDIN includes researchers from Biology, Chemistry, Electronics, Mechanics, Civil and Architecture Engineering. CEDIN offers the following services:

Manual Search (It consists in doing the search in the printed patent collection).
Online Search (The online search may be conducted by searching online or on CD-ROM).
Patent Sector Collections (Currently, the INPI has patent collections specializing in leather and footwear).
Auto Supply of Technology Information Programme (PROFINT) [18].

The service sends monthly the first sheet of the countries patent documents that was chosen by each company concerned.

2.3.2. Mexico

The Mexican Institute of Industrial Property – IMPI has legal authority to administer the industrial property system in Mexico.

The IMPI's Technological Information Center (CIT in Spanish) [19] has a documentary center with references and complete patent documents of the main industrial property offices from around the world [20].

The IMPI's documentary collections are within the reach of the public, including independent inventors, enterprises, universities, research and development institutes and/or centers, among others.

The CIT provides the following services:

Table 3
The quantity of Latin American patent applications in the USA.

	Country	2000	2001	2002	2003	2004	2005	2006	2007	Total 2000–2007
	Total Foreign*	131,131	148,997	150,200	153,500	167,407	182,866	204,183	214,807	1,353,091
	Total US**	164,795	177,511	184,245	188,941	189,536	207,867	221,784	241,347	1,576,026
GI	Brazil	220	219	243	259	287	295	341	375	2239
	Mexico	190	196	157	185	179	180	213	212	1512
G2	Argentina	137	137	95	125	103	94	117	150	958
	Chile	24	23	38	33	51	55	76	68	368
	Colombia	21	29	16	20	20	11	21	23	161
	Cuba	15	13	7	6	12	13	14	15	95
	Ecuador	6	5	8	11	5	6	10	6	57
	Guatemala	2	5	2	1	1	2	2	2	17
	Peru	5	8	8	8	5	2	2	3	41
	Venezuela	45	53	36	29	18	34	22	32	269
G3	Belize	0	0	0	0	0	0	0	1	1
	Bolivia	0	0	1	1	1	3	2	1	9
	Costa Rica	16	3	8	11	9	32	17	20	116
	Dom. Republic	3	1	4	5	5	5	6	9	38
	El Salvador	2	3	1	0	1	0	0	2	9
	Haiti	1	0	1	0	0	0	0	1	3
	Honduras	1	0	0	0	2	2	1	1	7
	Nicaragua	0	1	0	0	0	0	0	0	1
	Panama	6	6	2	14	1	6	5	9	49
	Paraguay	1	0	0	0	1	0	1	0	3
	Uruguay	4	7	8	11	9	16	11	9	75

* Quantity of foreign patent application in USPTO.
** Quantity of US patent application in USPTO.

Table 4
The quantity of Latin American patent applications under the PCT.

	Country	2000	2001	2002	2003	2004	2005	2006	2007	Total 2000–2007
	Total PCT	93,238	108,230	110,392	115,203	122,630	136,749	149,653	159,737	995,832
GI	Brazil	178	173	201	219	278	270	333	396	2048
	Mexico	73	104	132	131	118	141	168	186	1053
G2	Argentina	9	9	9	15	11	20	20	32	125
	Chile	1	3	6	9	6	9	12	17	63
	Colombia	4	17	36	24	22	23	29	45	200
	Cuba	4	14	11	20	18	11	21	22	121
	Ecuador			2	5	9	1	7	2	26
	Guatemala		1				1		1	3
	Peru	3		1	2			1	2	9
	Venezuela	2		1	1	1	2	2	5	14
G3	Belize	1	3	2	3	9	5	1	1	25
	Bolivia					3			1	4
	Costa Rica	7	7	4	6	6	4	6	5	45
	Dom. Republic	1							2	3
	El Salvador	2	1							3
	Haiti	1								1
	Honduras						1			1
	Nicaragua	1								1
	Panama	6	10	7	16	15	17	16	14	101
	Paraguay					1				1
	Uruguay	4	4	9	11	5	5	4	5	47

2.3.2.1. Free of charge services. Performed by the user himself

a. Consultation of paper documentary collections at the CIT.
b. Consultation of micro format documentary collections at the Technological Information Center.
c. Search and consultation on IMPI's National Patent's Bank on Internet (BANAPANet [21] in Spanish).

2.3.2.2. Charged services. Performed by IMPI's search examiners

1. National technical patent information search.
2. International technical patent information search.

a. Consultation on electronic databases from around the world for references and complete documents of patent.

3. Documents photocopying service.

2.3.2.3. Patents in the public domain. The IMPI has a catalogue with patents in the public domain; the objective is to show the products technology, processes and equipment contained in those patents have expired, in accordance with the Industrial Property Law. Many of these patents provide updated information in various fields of knowledge that can be copied without payment of patent royalties for their holders.[3]

2.4. Countries with 10 to 100 million inhabitants – Group G2

2.4.1. Argentina [22]

In Argentina the National Institute of Industrial Property – INPI is the office responsible for implementing the laws on protection of industrial property.

The Information Technology Department of INPI provides information services for industrial, researchers and inventors concerning the existence of patent documents of products, devices and technology in general, by doing internal and external searches in databases.

The information is essential to the policy makers to decide if a new technology will be introduced or will replace the existed technology, in order to optimize human resources, technical and financial, through the sale or licensing of technology, to avoid duplication of effort and the waste of resources.

The information can be used also as a starting point to begin a development or to implement innovations.

The information can be very useful before filing a patent application, avoiding incurring costs in cases where the alleged invention was already known or allowing adjustment of the scope of the claims against the state of the art and then expedite the process of patenting.

The searches in Argentine patent databanks allow local and foreign businessmen avoid possible infringement of Argentine patents existing taking the necessary precaution in advance.

The searches in foreign patent databases enables that exporting Argentine companies avoid possible patent infringements of the fate of their country's exports.

The INPI offers the following services of technological information:

Background search (patents, industrial designs and models, foreign brands, available technologies and other background)

- Thematic search.
- Bibliographic data search.
- Searches by the interested person, assisted by personnel of INPI.
- Technology monitoring (Argentine and foreigners' documents).

2.4.2. Chile

The Department of Industrial Property – DPI develops Industrial Property administrative activity.

The DPI has the principal function manage and perform the Industrial Property services in accordance with the Law and its amendments, and regulation.

The Office of Information Technology – OFINTEC [23] of DPI has the largest amount of technical information that exists in Chile, becoming the largest source of updated information nationally about the technological development worldwide. The OFINTEC has the applications and patents of Chile, and it has the patent collections of the European Patent Office, applications submitted

[3] **Editor's note**: Although care is needed to be sure that no other rights protect a particular product, process etc.

through the Patent Cooperation Treaty (PCT), a collection of US patents and publications of the Japanese Patent Office.

The guidelines established by the Directorate of Industrial Property Department (IPD), the Office of Information Technology (OFINTEC) describe three main objectives:

- To promote the use of collections of information technology.
- To increase the training of human resources in industrial property.
- To develop mechanisms to protect technological innovations through patents.

When DPI established these objectives it began to integrate the process of technological innovation because it started to teach and disseminate industrial property in universities, businesses and other sectors.

2.4.3. Colombia

The Delegatura para la Propiedad Industrial is the office of the la Superintendencia de Industria y Comercio which has administrative autonomy, financial and budgetary, generally to administer the industrial property system and complies with the task of granting rights use of distinctive signs and new creations, and promote the transfer of technological information.

The Superintendencia de Industria y Comercio provides patents consulting online in Colombia and the world. Access to databases [24] is provided free of charge:

Databases in Colombia:

The database has all the documents presented in Colombia about patents and utility models, so the general public are able:

- To check the status of patent applications.
- To facilitate the tasks of search and retrieval of patent documents in Colombia.
- To search documents to avoid infringing inventions protected in Colombia.

The database with inventions in the public domain allowed to disclose inventions that become public domain that have expired or that their protection has ended in accordance with current standards on Industrial Property in Colombia.

The following services are available as technological information:

- Technological Monitoring.
- Technological Newsletters.
- Technological Prospecting.
- Technological Radiographs.

2.4.4. Cuba

Through the Servicio Especializado al Sector Empresarial (SESE), the Cuban Office for Industrial Property (OCPI) offers a package of services and information and industrial property advice for SMEs. As part of this service, the Department's information of OCPI acts as a manager between companies and technical areas of the office that work actively. Everyone SMEs that need this service can access the same.

The services of SESE [25] are:

- Diagnosis of the industrial property activity in company.
- Searches in the state of the art.
- Training and advising on industrial property.
- Proposals and advice on the selection of trademarks, trade names and slogans.
- Research on trademarks and others distinctive signs.
- Advice for the implementation of the Industrial Property in National System of the enterprise.
- Courses and conferences.

The SESE offers personalized advice to the companies according to the necessities of industrial property. The overall objectives of this service are:

- To promote technological innovation.
- To focus technological management according to the global trends.
- To know the threats, weaknesses, strengths and opportunities in the competitive environment.
- To contribute with the corporate and commercial image of the enterprise.
- Redesign business strategies.

The diagnostic service is free for all businesses. It is to evaluate and develop intellectual property domestic strategy in SMEs. The costs of the searches with informative analysis, as well as for the creation of trademarks, trade names and slogans commercial analysis of business environment and historical marks are calculated based on the number of hours worked. The search service information and copies of documents follow the official rates.

2.4.5. Ecuador

The Instituto Ecuatoriano de la Propiedad Intelectual – IEPI[26] is responsible for regulating the control of enforcement law of intellectual property.

The IEPI is the entity that has the responsibility to promote, develop and protect the intellectual property, in order to promote the economic, social and cultural life, so it needs to view the future and establish its strategies, which will be integrated the work of its different areas, for fulfilling its institutional mission and meet the needs of their users. Thus, one of the strategic objectives of IEPI is provide the property rights protection and defense of intellectual property rights recognized in national legislation and international treaties and conventions in order to leverage the economic and technological development and the creation of wealth in Ecuador.

2.4.6. Guatemala

The Registro de la Propiedad Intelectual – RPI is a unit of Ministry of Economy responsible for promoting the observance of Intellectual Property Rights.

The RPI has some information about patents and utility models [27], but about the patent as technological information was not found. The Table 5 shows the main information available on the website.

2.4.7. Peru

The Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual – INDECOPI – has as functions to promote a culture of correct and honest competition in the Peru economy and to protect all forms of intellectual property.

The INDECOPI [28] does not show the importance of the patent as a resource of technology information.

2.4.8. Venezuela

The Servicio Autónomo de la Propiedad Intelectual – SAPI is a government agency that has the mission of exercising stewardship of the Venezuelan State in the field of copyright, trademarks and patents.

Through the SAPI website is possible to search for tools and access to the patent documents in *.pdf format [29]. However, no important information is made available such as definitions of

Table 5
The information about patents available in patent offices.

Type of information	PATENT offices of the countries																				
	AR	BO	BZ	BR	CL	CO	CR	CU	DO	EC	SV	GT	HT	HN	MX	NI	PA	PY	PE	UY	VE
Patent	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	–	X	–	X	X	X
Utility model	X	X	X	X	X	X	X	–	X	X	X	X	–	X	X	–	X	–	X	X	X
Patent Definitions	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	–	X	–	X	X	–
Organogram	–	–	–	X	–	X	–	–	X	X	X	X	–	X	X	–	X	–	X	–	–
FAQs*	X	–	X	X	X	X	X	X	X	X	–	X	–	–	X	–	X	–	X	–	–
Classification	X	–	X	X	–	X	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Gazette	X	X	X	X	–	X	–	X	X	X	–	–	–	–	X	–	X	–	X	X	X
Guidelines	X	–	X	X	–	–	X	–	–	–	–	–	–	–	–	–	–	–	–	–	–
International Agreements	X	X	X	X	X	X	X	X	–	X	–	X	–	–	X	–	–	–	–	–	–
Laws	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	–	X	–	X	X	–
Patent Searches	–	–	–	X	X	X	–	X	–	X	X	–	–	X	X	–	X	–	–	–	X
PCT	–	–	X	X	–	X	X	X	–	X	X	X	–	–	X	–	–	–	–	–	–
Statistics	–	–	–	X	X	X	–	–	–	X	–	X	–	–	X	–	X	–	X	–	–
Cost/Fees	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	–	X	–	X	X	X
Forms	X	X	X	X	–	X	X	X	X	X	X	X	–	X	X	–	X	–	X	–	–
News/Events	X	X	X	X	X	X	X	X	X	X	X	X	–	–	X	–	X	–	X	X	X
Links	X	X	X	X	X	X	X	X	–	X	X	X	–	–	X	–	X	–	X	X	–
Homepage	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	–	X	X	X
Contacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

* Frequently asked questions.

patents, laws links to other organs of industrial property. It also fails to highlight the importance of the patent as information technology.

2.5. Countries with less than 10 million inhabitants – Group G3

2.5.1. Belize

The functions of Belize Intellectual Property Office – BELIPO [30] are:

- To administer the intellectual property legislation of Belize.
- To advise the Government of Belize on intellectual property matters.
- To promote knowledge of intellectual property law in Belize.

The BELIPO has a website where there is some information to protect the intellectual Property as trademark, patent, industrial design and copyright. However, there is not any information on the importance of patents as a source of technological information.

2.5.2. Bolivia

The Servicio Nacional de Propiedad Intelectual – SENAPI has as institutional mission administration of intellectual property, through the rules of industrial property and copyright.

The SENAPI [31] provides all information necessary for the registration of industrial property, particularly patents, utility model, industrial designs, trademarks and integrated circuits.

2.5.3. Costa Rica

The Registro de la Propiedad Industrial Office [32] is the administrative authority attached to the National Register, which is responsible for the filing and registration of Industrial Property rights.

Through the website it is possible access the Patent Applications Exam and Organization Manual. The website does not show the importance of patents as a source of technological information.

2.5.4. Dominican Republic

The Oficina Nacional de la Propiedad Industrial – ONAP [33] is an entity with technical and patrimonial autonomy responsible for the administration of Industrial Property aiming at development and protection of the same in the Dominican Republic.

There is provided various information about the patent system such as types of protection [34] (patent and utility model), legislation, forms, and news. However, it does not describe the importance of the patent as a source of technological information.

2.5.5. El Salvador

The Centro Nacional de Registros – CNR provides several services including intellectual property. The CNR site also has available the following:

1. Technology information.
2. Intellectual property free advice.
3. Intellectual property for SMEs.
4. Competitive intelligence services.

On the website is available an article [35] that shows the importance of the patent documents as a source of information, explaining that it has the following advantages:

- Show the latest information.
- Have a uniform structure in the international level.
- Contain information not disseminated in other literature.
- Contain a summary that gives rapidly an idea about the contents of the patent without having to read the entire document.

Patent information is very important to the patent offices because it offers a special tool which is very important to guide development and it can be much more powerful when the data analysis is made by industrial property experts.

Patents give access to the technological information to the industry, inventors, and educational institutions.

Some dos services available in CNR are:

1. Reading room.
2. CD-ROM search.
3. Patent documents copy.
4. Assisted search on the internet.

The information services are available to:

- SMEs
- Research institutions – development

- Independent inventors
- Government authorities
- Educational institutions
- Professionals in the field of industrial property

2.5.6. Haiti

Haiti does not have patent information available on the website of a patent office so the access to the information about the patent system is very difficult. The Office responsible for industrial property in Haiti is the Service de la Propriété Intellectuelle – SPI.

The office to request information and protect industrial property is:

Ministry of Trade and Industry [36]
Directorate of Legal Affairs
Intellectual Property Service
Address: Rue Légitime 8 Port-au-Prince
Telephone: (509) 222 82 50/223 16 28
Telefax: (509) 223 84 02/221 3130

2.5.7. Honduras

The Office responsible for the registration of Industrial Property in Honduras is the Dirección General de Propiedad Intelectual – DIGEPIH [37].

The homepage of DIGEPIH defines what is a patent and a utility model and the requirements necessary for the protection of inventions.

It provides the forms to request search of prior art, as well as information on fees and events details.

The site of DIGEPIH has a link to LATIPAT where it is possible to search for patents.

2.5.8. Nicaragua

In Nicaragua in spite of providing the patent office website the access was not possible because it was offline [38].

At the website of the WIPO was possible to find the following information:

Ministry for Economy and Development [39]
General Directorate for Industry, Office of the Industrial Property Registry
Web site address: http://www.rpi.gob.ni
Address: Costado Este del Hotel Intercontinental, Manágua
Telephone: (505) 267 4551
Telefax: (505) 267 5393
E-mail address: rpi@mific.gob.ni

2.5.9. Panama

Through the Industrial Property [40] online system one can access the definitions of patent and utility model. It was found that Panama provides protection for patents and utility models. It is possible to search patents on the website, but only in the fields of number and holder name of the patent.

In the website are available organizational structure, frequently asked patent questions, the patent gazette, legislation, costs, forms, news, links and contacts.

2.5.10. Paraguay

The Dirección de la Propiedad Industrial in Paraguay does not have a website but the Ministry of Industry and Commerce has some Industrial Property information in its website [41].

We also found a link to the homepage of the WIPO [42]. On that site were found the following information:

Ministry of Industry and Commerce
Directorate of Industrial Property
Address Avenida España 477, Asunción, Casilla de Correo 1375
Telephone (595 21) 444 231
Telefax (595 21) 213 970
E-*mail address*: dpi@conexion.com.py

2.5.11. Uruguay

The Dirección Nacional de la Propiedad Industrial – DNPI [43] provides information on the website in four languages, Spanish, English, Portuguese and French.

The access to the patents database is available only to users that have a login and password.

The International Patent Classification – IPC is not available on the site, only the International Classification of Locarno which is used for classification of industrial design.

The DNPI has a wealth of information technology unique in Uruguay, which is offered entirely to the public through the Information Services Technology. The information includes:

- Uruguayan patents and utility models.
- USA and Europe patents collections on CD.
- Industrial designs.
- Trade marks.
- Industrial property gazette.
- Publications
- Domestic and foreign databases.

Internet access to more than 30 million patent documents from developed countries.

2.5.12. Patent information summary

Table 5 summarizes the different information on the patent system available on the homepages of the patent offices.

Table 5 will be discussed in the item relating to the results.

2.6. Latipat [44,45]

The EPO launched its Co-operation Project with Latin America in the 1980s. Since then, political dialogue and trade between Latin America and Europe has significantly increased. Indeed, the region of Latin America is nowadays one of the European Union's most important trading partners and represents a strategically important investment market, with significant potential for growth.

The EPO seeks to build strong, long-term partnerships with the region's emerging countries in order to face the new challenges of the global patent system and co-operates with the national offices to consolidate a sound industrial property (IP) system for Latin America.

The project has the following objectives:

- Organizing high-level meetings and regional forums to discuss strategic issues and common challenges.
- Providing access to search and examination tools to improve the quality of the patent granting procedure.
- Coordinating training activities to increase the capacity of the national offices.
- Creating a comprehensive database of Latin American patent documentation, available worldwide via the internet.
- Promoting the use of patent information in the region.
- Increasing general awareness of industrial property rights (IPR) and a country's ability to benefit from these rights.
- Strengthening judicial authorities' enforcement of IPR.

The project covers the national offices of the following 19 countries of Latin America: Argentina, Brazil, Bolivia, Chile, Colombia,

Table 6
Amount of the access to the LATIPAT database – 2006/2008

2006	2007	2008				Total
April–December	January–December	January	February	March	April	
1,745,316	4,443,528	230,695	243,016	324,680	320,303	7,307,538

Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

The LATIPAT project: The LATIPAT – *esp@cenet* [45] website provides access to the bibliographic and image data of patent documents published in the Latin American countries.

Table 6 shows that the amount of consultation of the LATIPAT database during 2006–2008.

3. Results

Each of the 21 countries in Latin America have an Industrial Property Office but only one Office does not have a website. However, the number of patent applications in Latin America is too small when we compare with the number of patent applications of the developed countries. The Table 4 shows that during 2000–2007, the PCT Office had 995,832 patent applications but the applicants from the countries of Latin America filed only 3894 applications, which corresponds to around 0.4% of total applications.

According to Table 4 we can observe that Brazil (2048) and Mexico (1053) (countries in G1) have more patent applications in the period 2000–2007. For Group G2 the corresponding figures were Colombia (200), Argentina (125), Cuba (121) and Chile (63), and in the G3 were Panama (101), Uruguay (47) and Costa Rica (45).

Table 3 shows that Mexico (1512) and Brazil (2239) are the Latin American countries that have the most patent applications filed by applicants from Latin America in the US, from 2000 to 2007. And the others countries that have most applications are: – Countries of G2: Argentina (958), Venezuela (269), Chile (368) and Colombia (161) and – Countries of G3: Costa Rica (116), Uruguay (75) and Panama (49).

Haiti is the country that does not offer a website and, hence, we are unable to assess and to analyze the information for this country.

We can observe that all the countries of Latin America protect inventions through patents. Regarding utility models Cuba is the only one that does not accept this kind of protection.

At the websites there is much information about the patent system but less information is offered by countries on the industrial property Offices Organogram, the international patent classification (CPI/IPC) and statistics (Table 5).

Each patent Office that provides for searching of patents use a different tool, so it is very difficult to collect and find interesting information. So, it was necessary to create a comprehensive database of Latin American patent documentation, and the database available worldwide is LATIPAT.

4. Conclusions

The objectives of the Latin American Offices are to provide the property rights protection and the defence of intellectual property, recognized in national legislation and international treaties and conventions, and provide good access to relevant patent information, in order to leverage the economic and technological development and the creation of wealth.

When we studied the Offices we found the "Manual de Organización y Examen de Solicitudes de Patentes de Invención) [46] that was written by the Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, República Dominicana and Panamá Offices. The objective of this Manual is to create a homogeneous culture in the administration, management and use of the patent system, mainly through:

- Strengthening national patent offices.
- The establishment and development of modern mechanisms for access to technological information regionally, nationally and internationally.
- Development and training for examiners.
- Consolidating efforts to facilitate the exchange of experiences among countries for the benefit of development and exploitation of the patent system as a tool that promotes economic development in the region.[4]

We think that it will be of great importance to Latin America that Brazil becomes an international search authority and international preliminary examination authority for the PCT. With this initiative the patent applications in the PCT will be simpler and easier for the Latin American countries.

Several other actions should be adopted like:

- Policy to encourage patenting in the countries of Latin America.
- The increased investment by the governments in order to create favorable environment for innovation.
- Training in industrial property in universities, companies and research centers.
- Disseminating the importance of patents as a source of information technology.
- Integration and harmonization of the patent system between the Latin America countries to obtain others results like the "Manual de Organización y Examen de Solicitudes de Patentes de Invención" and the database LATIPAT.

Through this work we presented the main patent information available for each country, mostly as found on their websites. However, the situation should be the subject of constant monitoring and study.

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[11] <http://www.internetworldstats.com/south.htm>.
[12] <http://www.wipo.int/directory/fr/urls.jsp>.

[4] **Editor's note**: Another similar initiative provided "Manual para el Examen de Solicitudes de Patentes de Invencion en las Oficinas de Propiedad Industrial de los paises de la Comuidad Andina" (Bolivia, Colombia, Ecuador, Perú) with the same objective as the Manual of Central America (ie an homogeneous culture of patents).

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[42] <http://www.wipo.int/directory/fr/contact.jsp?country_id=144&type=ADMIN_IP>.
[43] <http://www.dnpi.gub.uy>.
[44] <http://www.epo.org/about-us/office/international-relations/projects/latin-america.html>.
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