

Strategies of the top global filers at the Indian Patent Office

As the number of patent applications filed by multinationals at the Indian Patent Office continues to soar, we take a closer look at the biggest filers and analyse the prevailing trends

By Anoop Kurup

Over the past decade, the Indian Patent Office has seen a significant increase in the number of patent applications it receives, in part due to over 80% of all applications being filed by global technology companies.

This article studies some of the top 10 filers in order to analyse the phenomenon of multinationals building their patent portfolios in India and their motivations for doing so.

Filing trends

Since 2001, the number of patent applications filed at the Indian Patent Office has increased by a rate of about 14% a year (see Figure 1). In the past decade (between 2002 and 2012), patent applications have quadrupled from about 10,000 to about 44,000 a year.

Applications filed by Indian applicants have been rising at a rate of about 12% a year over the last decade. Although this is a significant increase, applications filed by Indian rights holders still account for only about 20% of all filings at the patent office. The reasons for this include:

- A lack of awareness about IP laws and the importance of intellectual property among Indian businesses.
- A culture of importing technology – traditional Indian companies tend to rely on importing technologies and

know-how from other markets, rather than creating their own in-house.

- A preference for short-term fixes – most companies in India come up with short-term solutions to problems. Tinkering with readily available resources to arrive at cheap, non-replicable solutions is known as *Juggad* – by their nature, such solutions are not patentable.
- Lack of long-term R&D – few Indian companies have R&D teams that conduct long-term research on problems. Most R&D teams are an offshoot of the quality control department and focus on short-term research to solve immediate business problems, and therefore their work/output is usually not patentable.
- The Indian legal system – cases in Indian courts take a long time to clear. Most businesses do not see the benefit of patents, since they assume that any attempt at enforcing them will be buried under the long timelines of litigating cases in India.

Notwithstanding this, there has been a slow but steady increase in patent filings by Indian applicants. This may be due to increased exposure to global competition and the adoption of best practices from multinationals. The trend also reflects the large number of filings by foreign applicants in India.

Global IP players and India

Year after year, about 80% of patent applications at the Indian Patent Office are filed by foreign global technology companies. In the past decade the number of applications by foreign applicants has risen from about 8,221 to 34,276. According to annual reports published by the

Controller General Of Patents, Designs and Trademarks, between April 2011 and March 2012 the top 10 foreign applicants filed 5,240 of these 34,276 applications.

This group includes some of the largest IP players in the world. For the past three years, seven companies have figured prominently in the top 10 that features in the controller's annual reports (see Figure 2). These seven companies – Qualcomm, Phillips, Sony, Siemens, Ericsson, BASF and Microsoft – are also prominent in the European Patent Office (EPO) and US Patent and Trademark Office (USPTO) lists of top filers. This year's report adds three new companies – GE, Sharp and ZTE – again, all prominent players in the global IP market (see Figure 3).

A comparison of the top 10 Indian patent applicants with EPO applicants and USPTO patentees reveals that these companies do have strong global portfolios (see Figure 4). However, the list of top 10 patent applicants in India is not exactly the same as that for other jurisdictions. Some distinguishing points include the following:

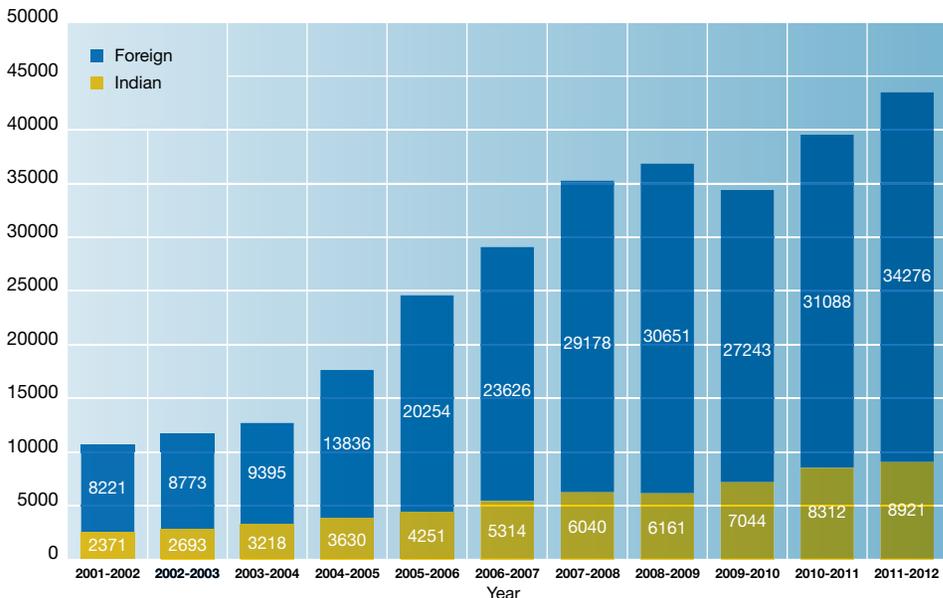
- Microsoft is the only prominent company in the software and computer sciences sector on the list. Other companies such as IBM do not feature.
- Qualcomm, Ericsson, and ZTE all have a business interest in telecommunications and have been prominent on the list for past few years. In fact, Qualcomm is the top filer of patent applications in India.
- Sony, Sharp and Philips all have interests in consumer electronics. Philips is also a prominent player in the healthcare devices market.
- GE and Siemens are companies with an interest in energy infrastructure, healthcare and related fields.
- India is still an agrarian society, but BASF is the only company on the list with an interest in agriculture chemicals and related fields.

The patent filing activities of the top 10 filers may correlate to India's changing economic and industrial interests. The country's economy grew at an annual rate of about 7% a year over the past decade, making it the 10th largest economy in the world in 2011, as measured by nominal gross domestic product. As India's economy has grown, so has the purchasing power of its people, along with the need for improved energy, healthcare and communications infrastructure.

A large telecommunications market

India is one of the largest markets in the world for telecommunications services and products, including handsets. According to

Figure 1. Patent application trends at the Indian Patent Office. Data for year starting April, ending March



Source: Annual Reports of Comptroller General of Patents, Designs and Trademarks

the Department of Telecommunications, over 895 million phone connections, both landlines and wireless, were active in India as of December 2012.

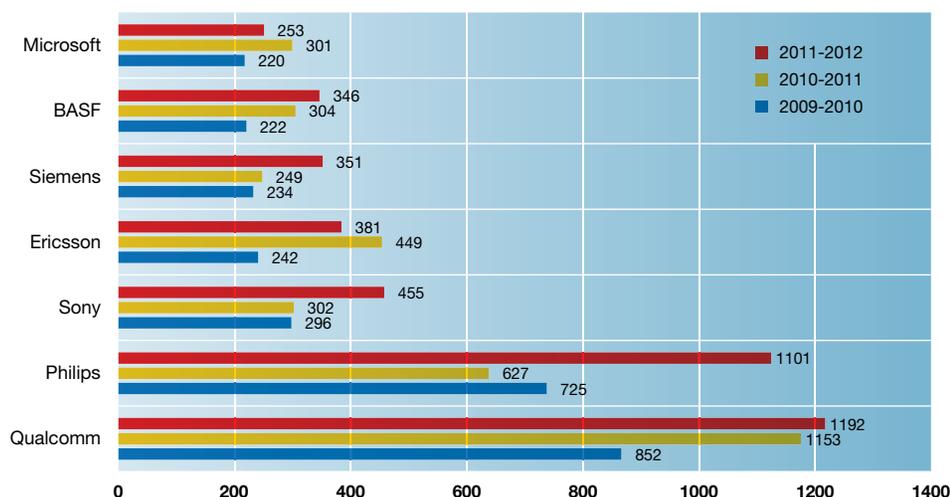
India's emergence as one of the largest markets for mobile telephony in 2005 – along with it signing up to the Agreement on Trade-Related Aspects of Intellectual Property Rights – has attracted telecommunications companies from around the world. These have proceeded to file large numbers of patent applications to protect their interests in the country.

Qualcomm has filed over 5,700 patent applications in India so far. An analysis of these reveals that they mostly focus on technologies related to telecommunications and specifically to wireless communication technologies.

Qualcomm is also a world leader in this area. It is the pioneer of code division multiple access (CDMA) technology and holds many of the 3G and 4G orthogonal frequency-division multiple access technology patents globally.

From Qualcomm's annual reports, we find that the company earns a good portion of its revenue from IP licensing. Qualcomm started earning IP royalties in India by licensing its CDMA technologies to local telecommunications companies. The most famous of these deals was made with Reliance Telecommunications. In June 2010 Qualcomm bid more than US\$1

Figure 2. Patent applicants at the Indian Patent Office which have appeared in the last three annual lists of top 10 filers



Source: Annual Reports of Comptroller General of Patents, Designs and Trademarks

billion for broadband wireless access spectrum in four Indian cities and it is expected to invest more in the near future.

ZTE is a multinational telecommunications equipment company headquartered in China. According to World Intellectual Property Organisation press releases, ZTE is the largest filer of applications via the Patent Cooperation Treaty (PCT) route. It has been aggressively filing patents for wireless mobile technologies and owns about 7% of all 3G technology patents globally, according to Reuters.

ZTE has filed over 500 patent applications in India in the past decade. A brief analysis of its applications reveals that these are mostly in the areas of wireless communication, mobile phone operations and telecommunications equipment.

ZTE also has multiple cross-licensing agreements with other telecommunications, handset manufacturing and mobile operating systems companies, such as Ericsson and Microsoft.

Ericsson is one of the largest standards-essential patent portfolio owners in the world. According to its website, at the time of writing Ericsson owns over 33,000 telecommunications patents and has over 100 patent licensing agreements in place.

Ericsson has filed over 2,700 patent applications in India. A brief analysis shows that these relate to wireless telecommunications and telecommunications equipment technologies. Ericsson is quite aggressive about enforcing its intellectual property in India. In 2013 Ericsson sued Micromax for

infringing its standards-essential patents and succeeded in obtaining a favourable judgment from the Delhi High Court.

Mobile patent wars

In early 2013 Ericsson launched an action against Micromax for allegedly infringing eight patents related to 3G, global system for mobile communications (GSM) and EDGE technologies. Micromax is the second largest vendor of mobile phones in India after Samsung, offering low-priced smartphones that rival the big manufacturers' products in features and specifications.

Ericsson filed suit in the Delhi High Court claiming about Rs1 billion (approximately US\$20 million) in damages. The Swedish company also stated that its legal action was being taken as the parties had failed to reach an agreement after three years of negotiations. The claimed damages made this the largest patent suit in India's IT and electronics sector.

The Delhi High Court passed an interim order that both parties had to adhere to until they reached an agreement. Some points from the order are outlined below:

- Ericsson and Micromax agreed to negotiate a fair, reasonable and non-discriminatory terms (FRAND) licence agreement within one month, based on FRAND terms.
- Indian customs officials would stop all Micromax consignments until Ericsson inspected and released them. On release of the consignment, Micromax was to pay Ericsson as per the rates given below for each device.
- Micromax was to pay the following royalty rates until the FRAND agreement was reached:
 - 1.25% of the sale price for phones/ devices capable of GSM.
 - 1.75% of the sale price for phones/ devices capable of general packet radio service (GPRS) and GSM.
 - 2% of the sale price for phones/ devices capable of EDGE, GPRS and GSM.
 - US\$2.50 for dongles and data cards.

The final settlement was reached out of court and the terms of the actual deal are not publicly available. Since the interim judgment was passed, the sales price of Micromax devices has increased by about 10%.

After this case was decided, we spoke to many Indian mobile handset manufacturers and learned that most of them had received legal notices from Ericsson. As of the time of writing, at least five companies were in negotiations with Ericsson for a licensing deal.

A high-growth energy sector

According to analysis by the US Energy Information Administration, in 2011 India was the fourth largest energy consumer in the world, after the United States, China and Russia. The administration also projected that India and China would account for the largest share of Asia’s energy demands by 2035, and noted that the power sector is the fastest-growing area of energy demand.

With such large growth, global energy companies have a lucrative market to explore. Entities such as General Electric (GE) and Siemens, which make energy infrastructure and power generation equipment, have been part of the Indian power sector for some time. Now that demand is exceeding traditional means of power production, global companies with superior technology can play a larger role in the Indian market.

In the past decade GE has filed over 1,700 patent applications at the Indian Patent Office. Analysis of these applications reveals that they are filed across multiple sectors, including data compression, energy equipment, coal gasification and wind energy.

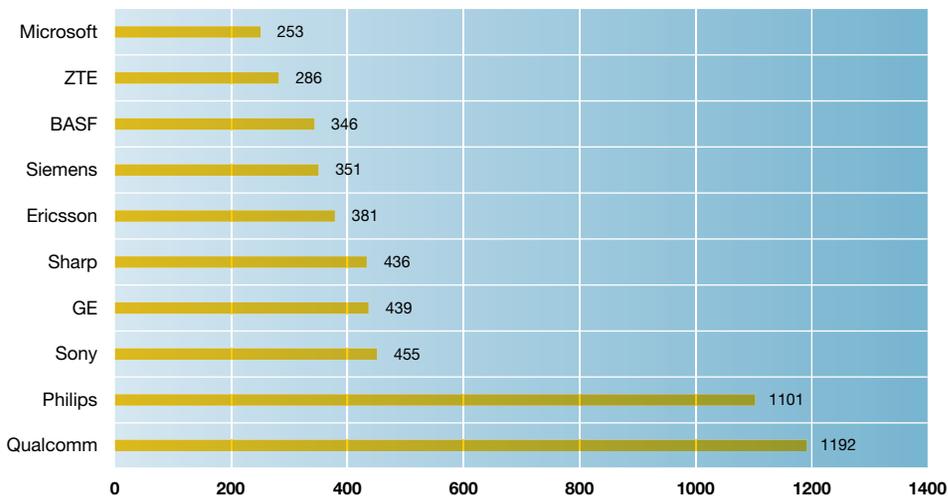
Wind energy-related applications and coal gasification-related applications are prominent in GE’s portfolio, which focuses more on protecting non-traditional power production technologies than on traditional turbine technologies. As one of the largest players in wind energy, GE is filing a large number of patents in India covering various aspects of power production using wind energy.

India has the fifth-largest coal reserves in the world and electricity is still produced by burning coal. However, traditional coal-based electricity production is inefficient and also leads to environmental pollution. Despite the country’s large coal reserves, Indian power plants are still under-utilised due to an insufficient supply of fuel. Novel technologies such as coal gasification can make coal-based power plant more efficient and cleaner. Based on the applications that it is filing, it looks as though GE is targeting the coal power plant sector.

In the past decade Siemens has filed over 1,500 patents in India. Analysis of these reveals that Siemens is filing across industry sectors with no particular emphasis on any one particular technology. Our study also reveals that Siemens’ interest in the energy sector is primarily in the area of electricity grid optimisation.

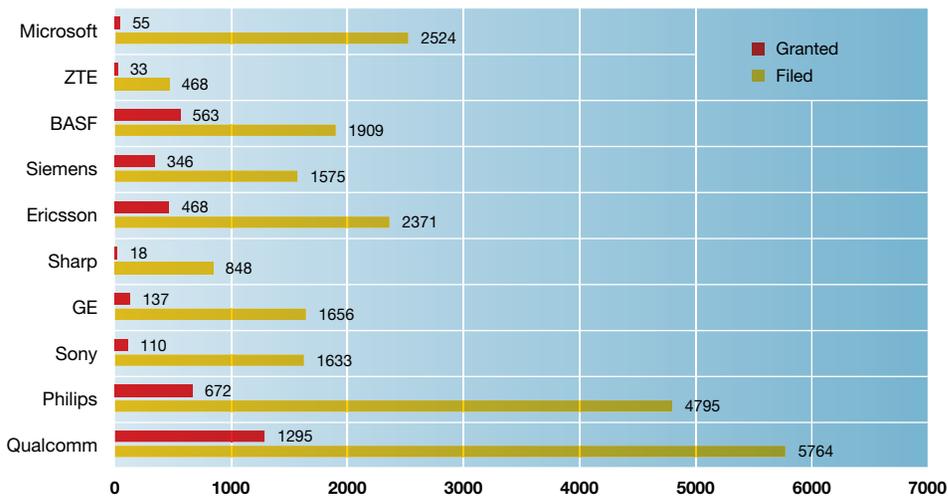
Global companies such as GE and Siemens will have a major role to play in India’s energy sector in the coming years.

Figure 3. List of top 10 patent applicants at Indian Patent Office April 2011-March 2012



Source: Annual Reports of Comptroller General of Patents, Designs and Trademarks

Figure 4. Patent applications versus granted patents at Indian Patent Office from 2001 onwards



Source: Indian Patent Office public search

As demand grows, only novel technologies will be able to deliver energy in an efficient and environmentally friendly manner. As demand for novel technologies increases, patents in the energy sector will become increasingly valuable.

Consumer electronics and counterfeiting

Consumer electronics manufacturers such as Sony, Philips and Sharp are prominent in the list of top 10 patent filers in India. In the past decade, Sony has filed over 1,600 patent applications, Philips over 4,000 and Sharp over 800.

Table 1. Application rankings of India's 2012 top 10 patent filers at EPO and USPTO

Company	India	Europe	USA
Qualcomm	1	7	14
Philips	2	12	38
Sony	3	13	3
Generic Electric Company	4	4	10
Sharp	5	21	25
Ericsson	6	9	44
Siemens	7	2	11
BASF	8	3	65
ZTE	9	10	265
Microsoft	10	47	7

Action plan



The Indian Patent Office is seeing increased filing activity by global IP powerhouses:

- Growth sectors such as telecommunications, energy, consumer electronics and healthcare are the main focus for patent applications.
- Patents that claim core technologies and standards-essential technologies are in demand, and also provide licensing royalties.
- Recent patent litigations and licensing activity showcase India as a potential market for IP enforcement and monetisation.
- While software and algorithms are not considered inventions under Indian patent law, the country's patent office does grant patents in the general area of software technology.

A study of these companies' patent applications reveals that they cover various consumer electronics products and technologies. Products include lighting, displays, data transmission, data compression, computer peripherals and entertainment systems. Although this mixed bag does not target particular technologies or products, it does cover most products manufactured and sold by these companies. The applications are also an extension of these companies' global patent strategy, since most have been filed in other countries, giving them priority in India.

Consumer electronics companies in India also face the growing problem of counterfeiting. A study conducted by the Federation of Indian Chambers of Commerce and Industries, under its Committee Against Smuggling and Counterfeiting Activities Destroying the Economy, revealed that over US\$20 billion's-worth of goods are counterfeited every year and many of these are consumer electronics products.

Various consumer electronics companies, including Philips, have raised the alarm over the issue and are seeking legislative reforms to help address it. Patents will definitely help these companies, as under Indian law, rights holders can take quick legal action against counterfeiters for patent and trademark infringement.

No software patents allowed

Section 3(k) of the Patent Act (amended 2005), states that "a mathematical or business method or a computer programme *per se* or algorithms, will not be considered as an invention".

Section 3(k) restricts the patenting of inventions that are mere algorithms or software. This section has been interpreted inconsistently by the patent office and has led to confusion among practitioners about the patentability of inventions in the area of computer sciences.

Microsoft is not only one of the largest patent filers in India, but also one of the largest filers of software-related patent applications in the world. The company has an active patent licensing and enforcement policy, and is actively engaged in multiple licensing deals across many software platforms.

Microsoft has filed over 2,500 patent applications at the Indian Patent Office in the past decade. However, it has been granted only about 55 patents in total.

This low number may be attributed to rejection under Section 3(k), although a quick study of the granted patent applications reveals that the patents may have been construed as being related to software and algorithms. Only a very detailed analysis of every rejection would reveal whether Microsoft is actually a victim of Section 3(k) or whether it simply chose not to prosecute the applications in India.

Strategic patent prosecution in India

The Indian Patent Office website informs practitioners that it is currently examining applications submitted to it in 2008 – a backlog of five years. The office has recently hired about 200 examiners in an attempt to tackle this. We can only hope that it continues to increase the number of examiners that it employs in order to achieve a more reasonable turnaround.

The large number of patents still awaiting examination makes it difficult to get an accurate picture of trends. The difference between application filing and patent grant is further widened due to the 48-month window that applicants are granted before having to decide whether to request examination of the application. The significant difference in numbers of patent applications filed and those granted for the top 10 filers at the Indian Patent Office is illustrated in Figure 5.

The 48-month period can also be used by applicants to study market conditions before deciding to proceed with prosecution. This generous window, along with low filing costs, makes India a tempting jurisdiction for companies interested in creating strategic patent portfolios. *iam*

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