



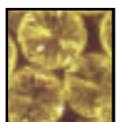
A BULLETIN
FROM
TIFAC

INTELLECTUAL PROPERTY RIGHTS (IPR)

VOL 10, NO. 5, May 2004

Diamonds are forever

Case study on synthetic diamonds as semiconductors



It may sound very unromantic to use diamonds as semiconductors. Gem stone diamonds are thought to add to human beauty. Semiconductor diamonds have the potential of enhancing the efficiency and speed of computers. If Moore's Law is to survive, diamonds have the necessary potential for achieving the goals.

The present invention relates to preparation of synthetic monocrystalline diamonds by using the technique of Chemical Vapor Deposition (CVD). One of the inventors, Robert Linares was a known researcher in semiconducting materials in 1980s. He sold his company engaged in making gallium arsenide wafers and set up a diamond research laboratory in 1985. This invention was a result of dedicated research of almost 15 years. (SPAN, March/April 2004). CVD method has the potential of producing extremely pure crystals of diamond of consistent quality. The patent was granted in June 2003 and the assignee is Apollo Diamond Inc., USA.

Background

You can get diamond from carbon. If pure carbon is placed at 1200°C under a pressure of almost 50,000

atmosphere, it will crystallize as diamond. It may take a few billion years before diamonds are forged in earth's mantle. Obviously, to create such conditions in a laboratory is quite tough. General Electrics used to produce synthetic diamond by using a 400 ton press to crush the carbon. This machine was successful in producing diamond dust. Later on larger sized diamonds were also produced. It has always been a problem to produce monocrystalline diamonds synthetically of large sizes in a cost effective manner.

Monocrystalline diamonds are found in nature but their characteristics are uncontrolled and suffer with wide variations in terms of colour, chemical purity and electrical properties. As such these diamonds cannot be used to produce large volumes of specialized items in a predictable manner. In fact, the engineering and industrial uses of diamond have been hampered on this account i.e., scarcity of monocrystalline diamonds. Monocrystalline diamonds provide a wide and useful range of properties such as hardness, chemical inertness, wear resistance, high thermal conductivity (almost five times higher than that of copper). and low friction. The thermal conductivity of diamond is seriously affected by impurities, polycrystallinity and crystal defects. Diamond is inherently an electric

insulator. However, by introducing some impurities like boron it can be converted into a semiconducting material. Life has not been simple on this track-many efforts have been made to utilize all the properties of diamonds. Success is still to be experienced at a commercial level.

Synthetic monocrystalline diamonds can be produced by a variety of methods mainly the high pressure high temperature method and CVD technique. The high pressure method has not succeeded in controlling colour, impurities and electrical characteristics. Further, it has not been possible to make monocrystalline structures having layer of varied compositions without having to remove the seed crystal from the reactor after each layer is formed. In this method, monocrystalline diamond is crystallized from metal solvated carbon at pressure of about 50 to 100 Kbar and temperatures of 1800 to 2300K. Resultant crystals grow in three dimensions but discontinuities arise due to fluctuations in the growth cycle.

In the CVD method, diamond grows two dimensionally, layer by layer and it is therefore, possible to build up a bulk crystal or plate or film which can be of a single composition or composed of layers of many compositions. There is a potential of producing diamonds as heat spreaders which will have

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Diamonds are

extensive use in computers. The present CVD techniques result in films which are polycrystalline. By using a monocrystalline seed, it would be possible to produce monocrystalline diamond. Generally speaking, the process requires that the substrate is maintained at a temperature in the range of 1000-1400K and precursor gas (gas phase carbon containing precursor molecule) be diluted in excess of hydrogen. One of the great challenges facing researches in CVD diamond technology is to increase the growth rates to economically viable rates. (100 and above $\mu\text{m/hr}$ or even a few mm/hr) without compromising the quality. Deposition temperatures need to be reduced by several hundred degrees, allowing low melting point materials to be coated with diamond and to increase the number of substrates on to which adherent diamond films can be deposited. For electronic applications single crystal diamond films are needed along with reliable techniques for patterning and controlled n- and p-type doping. Today's high speed microprocessors become hot at temperature higher than 90°C . They cannot go much faster without failing. Diamond microchips could handle much higher temperatures allowing them to run at speeds that would liquefy ordinary silicon. In semiconductor devices such as solid state laser a high level of heat is generated in small area. This heat should be removed to avoid failure of the device. This could be achieved by attaching a diamond plate to the device which rapidly removes the heat and spreads it on a large area of a cooling fin or cooling device.

Description of Invention

The present invention enables production of synthetic monocrystalline diamonds providing an improved combination of various

properties such as thermal conductivity, crystal protection, coloration, strength, velocity of sound, fracture toughness, hardness and shape. The improved diamonds are prepared by a method of controlled CVD in which amounts and types of impurities are carefully controlled within one or more layers of the diamond. In one embodiment such impurities would include boron within one or more layer of a multilayered diamond. It is possible to grow alternate layers of phosphorous doped diamond, thus creating a p-n junction which is necessary for many semiconductor devices.

This kind of layered deposition also leads to combination of many properties mentioned above. Improved thermal conductivity is also achieved by lowering the nitrogen content in a thick single layered diamond, while maintaining carbon isotope levels at natural or near natural levels.

Many examples of actual production have been presented in the patent document covering hot filament method, arc jet method, combustion method and microwave plasma method. An example of doped diamond is given below.

A polished diamond single crystal having a (100) orientation and a thickness of 75 micrometers is cleaned with hot detergent in an ultrasonic cleaner, rinsed in acetone and dried. The substrate is then placed in a hot filament CVD reactor having a substrate tungsten filament heater held within a molybdenum holder and having a rhenium filament approximately 10mm from the substrate. The reactor is evacuated to a pressure of less than 10 millitorr and then backfilled to a pressure of 40 torr with hydrogen having a purity of 99.999% at a rate of 100 sccm. Power is applied to the rhenium filament to achieve a temperature of 2100°C . Power is applied to the rhenium heater until

it reaches a temperature of 950°C . After stabilization, methane gas and diborane is added to the gas stream so that the final mixture contains 99% hydrogen, and 1% methane containing 1000 ppm of diborane. The gas flow is maintained at 100 sccm. Part of hydrogen is converted to atomic hydrogen on the surface of the filament and the methane is decomposed in the presence of the atomic hydrogen on the substrate to form an epitaxial layer of diamond. Growth is maintained for 15 minutes at a rate of 1 micrometer per hour to form a single crystal deposit of 0.25 micrometer thick. At the end of this, a diborane flow is terminated and methane flow is continued for an additional 75 hours.

The single crystal diamond substrate with the attached diamond film is removed and cleaned in a mixture of chromic acid and sulphuric acid at a temperature of 250°C to remove non diamond carbon, having a boron doped single crystal diamond layer embedded in a 150 micrometer thick diamond crystal. A (100) oriented single crystal diamond structure is formed having 75 micrometer thick undoped diamond followed by 25 micrometer thick boron doped single crystal diamond layer, followed by a 75 micrometer thick CVD single crystal layer.

The patent describes a whole lot of applications of using the methods described such as gemstones, scalpels, wire dies, heat spreaders, optical windows, knives, cutting tools and substrates for monocrystalline diamond active devices.

Claims

There are 42 claims, of which a few are reproduced:

1. A method of forming synthetic monocrystalline diamond comprising the steps of:

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Diamonds are

- a) growing diamond by a chemical vapor deposition process in which one or more impurities are controlled in one or more diamond layers in order to provide improved properties;
 - b) growing the diamond to an overall thickness of at least about 20 microns; and
 - c) optionally, removing the grown diamond, wherein the step of controlling the impurity comprises lowering the nitrogen concentration to substantially below normal levels while maintaining the isotope concentration at normal or near-normal levels.
2. A method according to claim 1 wherein the diamond is a single layer monocrystalline diamond.
 3. A method according to claim 1 wherein the improved properties are selected from the group consisting of thermal conductivity, hardness, fracture toughness, electrical conductivity, optical properties and crystal perfection.

It can be seen that the claims are very broad and would cover all types of dopants. The only governing parameter would be nitrogen concentration and carbon isotope concentration. The former can vary from 5 ppm to 20 ppm and the latter from 0.1% to 0.8%. The extent of thermal conductivity achieved varies from 2500 W/mk to 3200 W/mk. The patent covers all types of products like gemstones, scalpels, wire dies, microtomes, heat spreaders, optical windows, knives, cutting tools and monocrystalline diamond devices. It is an extremely good patent document. Everyone should read it to understand the concept of novelty and non obviousness. This document explains the process in a much better way than usually described in text books.

Case Law

THE FAMOUS COLA WAR

(Copyright of advertisement phrases and themes)

An interesting case between Pepsi Cola Inc and Hindustan Cola Ltd was decided in the Delhi High Court on September 21, 2001 in favour of Hindustan Cola Ltd wherein the court had to decide on the exclusive rights of a party on commercial advertising themes. Pepsi cola Inc, then filed an appeal in the Delhi High Court and finally the case was decided in favour of Pepsi Cola Inc., on September 1, 2003.

In the present case law, the appellant (so called plaintiff in the trial court), Pepsi Cola Inc and the respondents Hindustan Cola Ltd (defendants in the trial court), in a bid to dominate the soft drink market were at war again, this time in the field of comparative advertising. The appellants popularised its products through print media, electronic media, hoardings, banners etc and various advertising themes. The appellants claim exclusive ownership and lawful proprietorship in all rights in PEPSI, PEPSI COLA, GLOBE DEVICE and the advertising phrase "YEH DIL MANGE MORE" which are registered under the Trade and Merchandise Act, 1958 and Copyright Act of 1957. They also claimed exclusive rights in the Roller Coaster Commercial. The respondents with a view to promote their products Thums Up and Sprite launched a series of television commercials. These commercials according to the appellants, disparaged the products of the plaintiffs thereby infringing the trademark and copyright of the plaintiffs with respect to its registered trademark "PEPSI" GLOBE DEVICE" and the phrase "YEH DIL MANGE MORE". The roller coaster commercial had been copied by

the respondents thereby infringing the copyright of the appellants.

One of the commercials showed a lead actor asking a kid his favourite drink. The kid mutters the word "PEPSI" in a muted way and thereafter the lead actor asks the boy to taste two drinks in two different bottles. The lead actor asks "Bacchon ko konsi pasand aayegi?" and the boy after tasting points out to one drink and says that drink would be liked by children because it is sweet. He preferred the other drink which tastes strong and that grown up people would prefer the same. The lead actor at that point lifts the lid from both the bottles and the one which is said to have strong taste reveals "Thumps up" and one which is sweet, word "PAPPI" is written on the bottle with a globe device and the colour that of the "PEPSI". The boy having given his initial preference "PEPSI" feels embarrassed. Then there were a series of commercials on which PEPSI was described as "Bachonwala" and Thums Up as "Bado Ke Liye and Damdar Hai", PEPSI as "Wrong Choice Baby" and "Thums Up" as "Right Choice". The lead actor also says "Kyo Dil Maange No More" in one of the commercials, depicting the product of the appellant in inferior form.

Earlier in this case, Pepsi Cola Inc, the appellants (plaintiffs before the trial court) filed an application for grant of ad interim injunction seeking order restraining the respondents (defendants) from telecasting the impugned commercials or any other form of advertisements through print, advertising or electronic media. The Delhi High Court (on September 21, 2001) dismissed the application for interim injunction on the grounds that prima facie no case was made out for disparagement and the defendants were not passing off their goods as those of the plaintiffs. The plaintiffs further contested the

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Diamonds are

case by filing an appeal in the Delhi High Court.

The appellants contended that advertisements of the respondents were not only made in mocking manner but in fact disparaged the goods of the appellant when the lead actor said "Wrong choice baby" and that "Thumps Up" was the right choice. While comparing "Thumps Up" with "PAPPI i.e. PEPSI", the respondents had tried to project to the consumers that the appellants' product was not meant for adults or grown-up children, but being sweet was meant only for kids. The appellants argued that calling PEPSI as a sweet drink may not denigrate its product but the manner in which the boy's preference for PEPSI was ridiculed by showing the boy feeling embarrassed is nothing but disparaging their products. They also contended that the slogan "YEH DIL MANGE MORE" is a literary work and hence copyrightable. To popularise this copyright work i.e. "YEH DIL MANGE MORE" they had spent enormous amount on this advertising theme and it was a successful theme in India. Similarly, the GLOBE DEVICE was a registered trade mark of the appellant. By showing the GLOBE DEVICE of the colour scheme on the bottle on which word "PAPPI" was written and then saying "YEH DIL MANGE NO MORE" (using registered trade mark in comparative advertising) constituted trademark infringement in terms of section 29(1) of the Trade and Merchandise Marks Act, 1958.

The respondents on the other hand, argued, that "comparative advertising was a facet of the "cola war". The appellant even through its commercials had attempted to parody the products and advertisements of "Coco Cola". The respondents also contended that calling PEPSI COLA as a sweet

drink or "bacchonwala" by itself did not in any way indicate that respondent hinted appellants' product as inferior. The respondent further argued that the impugned advertisement neither used the trade mark of the appellants in the course of trade or in any manner suggested the connection of appellants trade mark with respondents' goods. Therefore, the contention of the appellant that use of its trade mark for comparative advertising was ipso facto infringement of the appellants trade mark, prima facie had no substance. The respondents also contended that the use of phrase "YEH DIL MANGE NO MORE" was in the context of a parody and did not amount to trademark infringement.

With respect to the roller coaster commercial, the appellants argued that the copying of the substantial portion of the appellants cinematographic film by the respondents in their commercial constituted copyright infringement. They further argued that use of appellants' commercial could not constitute "fair use" or can be called a parody. The respondents countered these arguments saying that section 14 of the Copyright Act envisages that copying of the cinematographic film must be identical in all respects and since the roller coaster commercial of the respondents was not a copy of the advertisement of the appellant, therefore provisions of section 14 of the Act defining the meaning of the copyright were not applicable to the facts of this case.

The court on hearing the arguments held that the advertising catch phrases are entitled to copyright protection. The copyright work "YEH DIL MANGE MORE" is the original work of the appellant and the appellant has spent enormous amount to popularise this advertising theme. "YEH DIL MANGE MORE" is a successful

theme of the appellant in India and its copyright should be protected.

Roller coaster commercial of the respondent was a copy of the theme of the roller coaster of the appellant. The roller coaster of the appellant is an original work of the appellant, therefore, covered under section 14 of the Act. Not only the presence of roller coaster is replica of the appellants' commercial but even the dress of the boys is also similar. The court concluded that the commercial of the respondent was nothing but a literal imitation of the copyright work of the appellant with minor variations. Therefore, the respondents should be refrained from showing its roller coaster commercial in its present form.

The court further held that in terms of section 29(1) of the Trademark Act, infringement would occur if appellants' mark had been used in the course of trade. It was nowhere alleged that the respondents had used the globe device of the appellants for its products nor passed on its products under the trade mark or globe device of the appellant. The impugned advertisement neither used the trade mark of the appellants in the course of trade or in any manner suggested the connection of appellants trademark with respondents' goods. Moreover, comparative advertising is permissible subject to the rider that it does not denigrate the product of the appellant. Therefore, the contention of the appellant that the use of its trademark for comparative advertising is ipso facto infringement of the appellants trade mark prima facie has no substance. Similarly use of the phrase in the commercial advertisement "YEH DIL MANGE NO MORE" can at best be mocking or parodying in the context it is used but does not amount to infringement of the trademark of the slogan of the appellant for its products.

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OECD's Blueprint for Enhancing Creativity and Innovation

The Business and Industry Advisory Committee (BIAC) to the OECD has come out with a discussion paper on innovations and economic growth in the 21st Century. The paper was prepared for the OECD Committee for Scientific and Technological Policy in January 2004. The paper emphasizes that there is an affirmative case that a well developed, carefully balanced system of IPR provides a fundamental foundation for promoting and achieving sustained creativity, innovation and economic performance in the 21st century. It proposes a proactive IPR Agenda for the OECD:-

A Proposed, Proactive IPR Action Agenda for "Value-Added" OECD Work Concerning Intellectual Property Rights

- Integrate IPRs more fully, including the quality and the scope of IPRs, as a core enabling condition for innovation in all OECD activities
- Address the changing role of IPRs at the interface between science and innovation and in the interactions between different stakeholders
- Combat counterfeiting through new OECD work and the development of a new international anticounterfeiting convention that will provide for effective enforcement.
- Develop new economic methodologies and economic indicators for measuring IPRs and understanding the increasingly critical role they play in stimulating innovation and economic performance
- Initiate a forward-looking project about the growing importance of IPRs in "converging technologies" by focusing on the changing role of IPRs in three key 21st century

drivers -biotechnology, information technology and nanotechnology

- Provide comparative analyses and undertake "value-added reviews concerning the intersection of IPRs and competition/antitrust policy
- Focus on health-related innovation as a principal policy challenge for the early 21st Century, and develop new frameworks and policies for linking IPRs and health innovation
- Analyze the role of markets for technology and the economic accounting of intellectual assets

A broad policy framework for IPR has been advocated in the light of scientific, technological, economic and social drives. There is a special focus on developing a new "systematic understanding" along the intersection and interaction of IPR with other enabling conditions for innovations such as competition policy, government regulatory regimes, the R & D infrastructure, capital formation, and open trade and investment.

The report states that many studies find social returns on R & D to be 20% to 150%. It is to be remembered that the magnitude of the social return varies among sectors and countries. It also goes on to say that research constitutes only almost 25% of the cost of commercializing a new technology and substantial up-front additional resources are needed to bring most products or processes to the market. A strong and effective IPR framework also improves each country's ability to attract foreign investment, especially to attract certain research or knowledge intensive activities that will result in important social benefits through new knowledge and new skills.

With the growth of complex cumulative technologies and blurring of economic activity across traditional sectoral boundaries, the diffusion and information and technology becomes more important for innovation. The report also reiterates

the story and effective IPR are essential tools for technology transfer. It goes on to say that the increasing use of public private partnerships or the creation of business government and NGO collaborations to meet technological and societal challenges would not be possible without IPR.

The paper quotes an OECD study which found that small countries are more dependent on technology and knowledge developed abroad. They require effective policies, such as IPR, to facilitate inflow of knowledge and capital embodied new knowledge and to create a competitive business climate. ***Having accepted this position, why should developed countries be really bothered about large scale infringement in developing countries?*** The message is quite clear that if developing countries do not have effective IPR system the flow of technology from outside may stop. As if this has not started happening! OECD obviously is expected to support the TRIPS and even the post TRIPS agenda.

The importance of protecting knowledge in areas of computers, telecommunications, semiconductors and other information based industries has been emphasized. It goes on to say that without proper IPR protection, investments in content correction, software and hardware will come down. An important role of IPR in the digital economy relates to its utility in helping multiple firms and individual solve industry-wide problems and to create entirely new markets through the development and improvement of industry standard that have precompetitive networking effects. IPRs serve as a central facilitating mechanism in the standardization of network technology is often not appreciated. The report goes on the state that

Contd on...12

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Litigation Watch

■ LG Electronics of South Korea has sued Whirlpool of US for violating its washing machine patents, including one that helps prevent clothes from being twisted together inside the washing machine. This case follows the patent infringement suit filed by Whirlpool against LG Electronics in August last year.

The Economic Times, May 20, 2004

■ A US district court jury in Massachusetts has found that No. 2 computer maker Hewlett-Packard Co. is infringing three EMC Corp. patents on software products. Data storage and software company EMC, which filed a complaint against HP's StorageApps in October 2000 plans to seek an injunction based on the verdicts.

Business Line, May 19, 2004

■ In response to the European Commission's decision to fine Microsoft for abusing its market position, the technology company has released a position paper claiming it will have "an adverse impact on IPRs and the ability of dominant firms to innovate." Microsoft says that two important questions arise from this decision: 'when does a firm with dominant position have a legal duty to license its proprietary technology...?' and 'when is it unlawful for a dominant firm to incorporate new components or features that demonstrably improve its finished product?'

Patent World, May 2004

■ Glaxo Group's United Kingdom key patent for Seretide has been invalidated for obviousness. Seretide, also known as Advair, an asthma drug, was challenged by Cipla, an Indian company, and the US based Ivax Corp. and a number of generic firms. Glaxo is expected to appeal the decision.

Patent World, April 2004

■ MicroUnity Systems Engineering has filed a patent infringement lawsuit against Intel and Dell, alleging the companies have copied the key

aspects of its multimedia processing technology and computer architecture. The lawsuit claims that basic core features of Dell's computer systems and Intel's microprocessors infringe seven of the company's patents.

Patent World, April 2004

■ Masimo, a small medical device company, has been awarded US\$134.5 million in damages by the Jury in Bermuda, from the Tyco's Healthcare business unit Nellcor. The case relates to technologies used in medical devices to monitor the oxygen levels in blood. In two previous cases filed by Masimo against Tyco relating to the Nellcor technology involved in the present case, the courts ruled that the technology did not infringe. Tyco will be challenging the present jury decision.

Patent World, April 2004

■ Hewlett-Packard has filed patent infringement case against Gateway relating to laptop, desktop and server computers. The six patents involved were licensed by eMachines to Compaq. Compaq was acquired by HP two years ago and eMachines was acquired by Gateway this year. The talks to extend the license (which ended in 1999) have broken down.

Patent World, April 2004

■ Motions to dismiss lawsuits against investor in Napster, accused of keeping the song-swap service and costing the music industry \$17 billion in lost sales is to be heard in June. Music publishers, songwriters and labels claim that an investment of \$90 million by Bertelsmann kept Napster going for eight months it would have done otherwise.

Copyright World, May 2004

■ The US Appeals Court has upheld a summary judgement ruling that Homan McFarling breached a technology agreement he had signed with Monsanto by saving some of his prior year crop of ROUNDUP READY soybeans for replanting the following year. But it vacated the district court's judgement on the

Contd on...12

Domestic News

■ A workshop on 'Arbitration & Mediation in IPRs; Dispute Resolution in Technology Agreements' was jointly organized by FICCI-IPRD, CSIR and WIPO in New Delhi. The urgent need for quick legislation in IPR and technology dispute resolution was emphasized. Maintenance of worldwide standard of products was highlighted for survival in global market.

Business Line, April 27, 2004

■ The Patna police busted a gang involved in printing and selling pirated books in Bihar of different publications including Lakshmi Publications, New Delhi and Pradeep Publications, Jalandhar. Pirated books worth Rs. 8 lakhs were recovered by the police.

Hindustan Times, May 9, 2004

■ HCL Technologies (HCLT) is expecting a minimum 5% additional profitability in terms of margin through IPRs in 2005-06. The company had started making small investments in IPR development, its entire infrastructure business is centered around the IPRs the company had built.

The Economic Times, May 5, 2004

■ Hazy Indian data privacy laws pose threat to work getting outsourced in India in the \$15-billion IT healthcare market which involves access to confidential patient and institutional data. It is imperative to enforce patient privacy laws in India also from a patient's rights point of view. NASSCOM and the Union Government are to study EU and US models to see how best India can enhance its data protection regulation.

The Economic Times, May 7, 2004

■ A two-day conference on "Revisiting

Contd on...7

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Patents for Opposition

The following patent applications have been accepted by the Patent Office and published in the Gazette of India. These can now be opposed by filing opposition applications within a period of four months from the dates given. Six digit numbers allotted after acceptance by the Patent Office are given before the applicant names and patent application numbers given in brackets. Names of the branches of the Patent Office are denoted in the application number, e.g. 'Bom' for Bombay branch. An opposition application should be submitted at the appropriate office where the concerned application was originally filed.

PATENT APPLICANTS

A. April 3, 2004

PATENT APPLICANTS	INVENTION
192301. Metallgesellschaft, Germany (1531/Cal/97)	Aqueous solution and process for phosphatizing metallic surfaces
192302. Steel Authority Of India Limited, New Delhi(1456/Cmal/98)	A device for cooling of hot rolled coils of steel at 650 700 degree c to 80 degree c at the cooling rate of 40 degree c hour
192303. Nippon Shokubai Co Ltd, Japan (420/Cal/99)	An improved method of production of acrolein and acrylic acid
192304. Intel Corporation, USA (Inpct/02/1403)	A method of receiving a request to access a web server and automatically delaying access to the web server and a system therefor
192305. Sa Simg Electronics Co Ltd, Republic Of Korea(2444/Cal/97)	Digital data coding decoding apparatus
192306. Lg Electronics Inc, Republic Of Korea (1887/Cal/96)	An improved microwave oven having cooking state indicator
192307. Flex Products Inc, USA (118/Cal/96)	Paired optical structure in foils inks and paints with matching colors at only one angle of viewing incorporating the same and method
192308. Siemens Aktiengesellschaft, Germany (1392/Cal/97)	Smart card
192309. Daewoo Electronics Corporation, Republic Of Korea (944/Cal/97)	An apparatus for encoding a contour of an object by adapting a vertex coding technique
192310. Swapan Ghorai, Midnapur, West Bengal (84/Cal/98)	A process for the manufacture of medical preparation from coconum shell
192311. Koninkluke Philips Electronics N V, The Netherlands (878/Cal/98)	Two way telecommunications system
192312. Metallgesellschaft Aktienge - sellschaft, Germany (396/Cal/97)	Process for producing a mixture of c3 and c4 olefins from a feed mixture containing c4 to c7 olefins
192313. Koninklijke Philips Electronics N V, The Netherlands (189/Cal/97)	Apparatus for and method of encoding a plurality of digital information signals
192314. Koninkluke Philips Electronics N V, The Netherlands (1220/Cal/97)	Electric lamp
192315. Siemens Aktiengesellschaft, Germany (1021/Cal/97)	Configuration for transmitting light between two locations at different electrical potentials and a method for producing such a configuration

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Domestic News

Farmers' Rights and Intellectual Property Rights was organized by Green Foundation in Bangalore. The procuring of IPRs by foreign companies over traditional resources including plant species, of the third world country was termed as intellectual and financial dacoity by judicial and agricultural experts. It was pointed out that US, which had only five native plant species, had managed to collect 6 lakh plant germplasm, which was supposed to be the world's largest germplasm. It was cautioned that making the community knowledge globally accessible could sometimes pave way for biopiracy wherein the foreign firms could try to obtain IPRs over traditional knowledge by making some cosmetic changes to it.

Deccan Herald, May 8, 2004

An SRF Ltd has been granted a patent by the USPTO for a "process for the production of difluoromethane". Difluoromethane is an ozone-friendly refrigerant gas and is one of the constituents of the blend that can replace Freon-22.

Business Line, May 9, 2004

An IGNOU has launched a three month awareness course in IPR. It is aimed at sensitizing scientists, researchers, teachers, and other such groups about IPR issues. The university has also announced a one-year post-graduate diploma program in IPR in collaboration with WIPO. The diploma is initially offered through select regional centers at Delhi, Hyderabad, Bangalore, Pune, Chennai and Kolkata and is aimed at training professionals on procedural aspects of obtaining IPR and obtaining them.

The Tribune, May 24, 2004

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192316. Slidell Inc, USA (2089/Cal/97)
192317. Thomson Multimedia S A, France (1307/Cal/96)
192318. Engelhard Corporation, USA (1544/Cal/97)
192319. Daewoo Electronics Corporation, Korea (1073/Cal/97)
192320. Bata India Limited, Kolkata (314/Cal/03)

B. April 10, 2004

192321. Atanu Bhattacharyya, Rammohan Sarani Nivedita Pally West Bengal India (1062/Cal/98)
192322. Samsung Electronics Co Ltd, Korea (102/Cal/98)
192323. Dystar Textilearben Gmbh Co, Germany (1010/Cal/97)
192324. Kawasaki Thermal Engineering Co Ltd, Japan (1223/Cal/97)
192325. Mitsuba Corporation, Japan (1033/Cal/97)
192326. Siemens Aktiengesellschaft, Germany (335/Cal/97)
192327. Mcneil Arm Inc, USA (1236/Cal/97)
192328. Steel Authority Of India Ltd, New Delhi (2204/Cal/98)
192329. Siemens Aktiengesellschaft, Germany (64/Cal/98)
192330. Uhde Gmbh, Germany (1784/Cal/97)
192331. Steel Authority Of India Limited, New Delhi (1446/Cal/98)
192332. Pannevis B V, Utrecht (1948/Cal/97)
192333. Automazioni Industriali Lanfranchi Di Lanfranchi Lino C S N C, Italy (2093/Cal/97)
192334. Nippon Shokubai Co Ltd, Japan (377/Cal/02)
192335. Daewoo Electronics Corporation, Korea (1061/Cal/97)
192336. Lg Electronics Inc, Korea (1807/Cal/96)
192337. Phooltas Tamper Pvt Ltd, Patna (124/Cal/00)
192338. Daewoo Electronics Corporation, Korea (1089/Cal/97)
192339. Daewoo Electronics Corporation, Korea (1056/Cal/97)
192340. Siemens Matsushita A Components Gmbh, Germany (1715/Cal/97)
192341. Pfizer Products Inc, USA (506/Del/00)

An apparatus for filling and sealing bags and method thereof
A color cathode ray tube having a uniaxial tension focus mask
A process for preparing a heat stable red strontium monoazo lake pigment
Apparatus for encoding an image signal by using the contour signal thereof
Shoe with improved ventilation system
An improved magnification device
Method and device for transmitting video data in radio communication system
A process for the preparation of reactive aluminium phthalocyaning dyestuff
A nitrogen oxide reducing apparatus in oil fired absorption refrigerating apparatus
Ignition system
Method and device for quick power regulation of a power station system
Tire loader basket
An improved process for hot rolling of concast slab
Chip card with a card carrier
Electrolyser for the production of halogen gases
A process of producing alumina zirconia silica azs composite for use as a high quality refractory material
Continuously operating separating device
A bottle straightening and aligning machine
A method for producing maleic anhydride
An apparatus for reconstructing contours in a contour image decoder
An improved magnetron with tenode vanes operating at 1250 1500 w
Adjustable turntable for rail cum road vehicles
An apparatus for encoding a contour image of an object in a video signal
Refrigerator having a device for generating an air curtain
A regenerable electrical capacitor
Process for preparing 2 phenyl 3 amionopyridine substituted phenyl derivatives thereof and salts thereof
A process for preparing a hydroxamic acid
A process for the preparation of novel amorphous form of sertriline hydrochloride
Process for the preparation of 7 amino 3 alkoxymethyl 3 cephem 4 carboxylic acid
An improved cryogenic process for the preparation of dry and fine spice powder

International News

■ The 15-member European Union enlarged on May 1, with the joining of ten more countries. This provides third countries including India, with both opportunity and challenge. Trade between India and the 10 new countries is only 1.5% of the trade between India and the EU-15, making trade diversion not substantial. The existence of uniform procedures and lower average tariff rates throughout the enlarged EU is likely to benefit Indian exporters. Third countries would also receive enhanced levels of IPR protection in the new member-states due to the adoption of EU regulation upon accession.

Business line, April 26, 2004

■ Software pirates are gouging China's hot online-games industry, offering identical games for free. The popular games offered include 'Mu' and 'The Legend of Mir'. Some pirate game servers are really big, with as many as tens of thousands of players at one time. It is estimated that the piracy cuts short some 3% to 4% from online game sales.

Business Standard, May 14, 2004

■ European Union Governments are preparing to endorse extended patent protection to help companies such as Nokia Oyj and Siemens AG counter US domination of the region's \$60 billion software market. A lack of uniform rules in the 25-nation EU has meant US companies such as Microsoft Corp are leading European firms in patenting software. That puts Ericsson AB the No. 1 business management software maker, and other EU businesses at a disadvantage when negotiating technology license agreements.

Business Line, May 14, 2004

■ The world's largest drugmaker company Pfizer's earnings growth is expected to slow down after this year due to a looming series of expiring patents on top drugs.

Contd on...9

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192342. Pfizer Products Inc, USA (512/Del/99)	An improved process for the production of spray dried honey powder
192343. Ranbaxy Laboratories Limited, New Delhi (540/Del/00)	An improved process for preparation of improved flour from coarse cereals suitable for preparation of roti or roti like products
192344. Ranbaxy Laboratories Limited, New Delhi (71/Del/2001)	An improved process for the preparation of acid stable lipase
192345. CSIR, New Delhi (441/Del/01)	An improved process for the preparation of a flavour compound 2 acetyl 1 pyrroline
192346. CSIR, New Delhi (419/Del/01)	A process for the preparation of puffed cubes from starchy vegetables
192347. CSIR, New Delhi (391/Del/01)	A fully automatic washing machine with separate washing facility
192348. CSIR, New Delhi (334/Del/01)	Process for preparing growth hormone secretagogues
192349. CSIR, New Delhi (224/Del/01)	An interstitial junction spacer
192350. CSIR, New Delhi (229/Del/01)	Aqueous based surfactant compositions
192351. L G Electronics Inc, Korea (670/Del/96)	An improved user friendly blood bag
192352. Pfizer Products Inc, USA (138/Del/00)	A process for the preparation of a composition for the estimation of ceruloplasmin
192353. W Loftus Co Pvt Ltd and Glass Block Constructions Aust Pvt Ltd, Western Australia (1682/Del/94)	A novel process for the isolation of betulinic acid from ziziphus jujuba
192354. Huntsman International Ltd, USA (563/Del/94)	A refrigerator having special storage system
192355. Mitra Industries Limited, New Delhi (692/Del/01)	Process for manufacturing a 1 2 benzisothiazolin 3 one
192356. The Chief Controller Research And Development Ministry Of Defence, New Delhi (581/Del/00)	A battery mounting device for a scooter type
192357. Dabur Research Foundation, Sahibabad (177/Del/00)	A liquid dispersion nozzle
192358. L G Electronics Inc, Korea (1428/Del/94)	An apparatus for sensing eye movement A process for the production of an aromatic dicarboxylic acid
192359. Zeneca Limited, England (463/Del/96)	A process for the manufacture of a novel metallic amido sulphate electrolyte
192360. Honda Giken Kogyo Kabushiki Kaisha, Japan (335/Del/96)	A photovoltaic optical structure with a plurality of photovoltaic cells
192361. Bharat Heavy Electronics Limited, New Delhi (1546/Del/95)	A pivoted lifting device for vehicles
192362. Autonomous Technologies Corporation, USA (623/Del/95)	A case for a battery charge
192363. Imperial Chemical Industries, United Kingdom (1562/Del/95)	A process for preparing flame retardant polyethylene composition
192364. Surjit Singh Mann, New Delhi (1132/Del/95)	A method for manufacturing regastening one piece tape tabs for disposable absorbent articles
192365. Yeda Research And Development Co Ltd, Israel (1822/Del/95)	A variable speed generator motor apparatus
192366. Dbt America Inc, USA (1600/Del/95)	A method of manufacturing a contact material for vacuum valve

Contd from...8

International News

Between 2006 and 2007 the company could lose patent protection on \$11 billion in sales more than 20% of last year's revenues. The Pfizer annual research budget of \$7.9 billion would be difficult to manage without smothering innovation.

Business Standard, May 4, 2004

■ The annual Special 301 report's 'Priority Watch List' of the United States for 'inadequate and ineffective' enforcement of patent laws listed 14 countries, namely India, Pakistan, Russia, Argentina, the Bahamas, Brazil, Egypt, Indonesia, South Korea, Kuwait, Lebanon, the Philippines, Taiwan and Turkey. While India has improved its IPR regime, protection of IP in some areas reveals "inadequate laws and ineffective enforcement", the report said.

Free Press Journal, May 5, 2004

■ New software called '123 Copy DVD' for copying DVD movies is available for \$19.99 in New York. The software along with an easily downloadable decryption patch can copy a majority of commercial DVDs. Another company '321 Studios Inc' was stopped from marketing its best-selling DVD copying software as it violated the 1998 Millennium Copyright Act of US. The US Millennium Copyright Act which prohibits use of decryption software. As 123Copy DVD software is not sold with the decryption software it does not violate the law.

The Economic Times, May 8, 2004

■ EMI Music Company saw annual profit slipping more than 8% as piracy continued to hit the record industry. Although notable stars such as Norah Jones, Robbie Williams and Coldplay helped in boosting the figure, the final results were near the bottom end of market.

Contd on...10

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192367. Honda Giken Kogyo Kabushiki Kaisha, Japan (2262/Del/95)	A tea bag package
192368. Secretary, Department of Science Technology, New Delhi (1405/Del/95)	A continuous process for the manufacture of solid particles and at least one persalt
192369. The Procter Gamble Company, USA (1068/Del/95)	A multi system video signal demodulating apparatus
192370. Kabushiki Kaisha Toshiba, Japan (1089/Del/95)	Positive displacement pump
192371. Kabushiki Kaisha Toshiba, Japan (323/Del/95)	Percutaneous catheter directed collapsible medical device
192372. Henry S Milone, USA (1535/Del/95)	Process for the preparation of anhydrous 2,2,4-bis(4-fluorophenyl)methyl-1-piperazinyl ethoxy acetic acid dihydrochloride
192373. Solvay Interroxx Societe Anonyme, Belgium (1708/Del/95)	A burner for the partial oxidation of a reactant fuel stream
192374. Sony Corporation, Chome (1189/Del/95)	A process for the preparation of filter cake
192375. Sedepro, France (1030/Del/95)	A tyre having at least one carcass reinforcement
192376. Aga Medical Corporation, USA (2908/Del/98)	A process for the preparation of controlled release formulation of tamsulosin
192377. Ucb S A, Belgium (3438/Del/98)	Process for the preparation of stable solid pharmaceutical compositions containing enalapril maleate
192378. Texaco Development Corporation, USA (79/Del/96)	An improved process for the preparation of cumene hydroperoxide
192379. Texaco Development Corporation, USA (790/Del/95)	A process for the preparation of aluminium nitride silicon carbide reinforced ceramic fiber useful for making metal or ceramic matrix composites
192380. Compagnie Generale Des Establishments (1047/Del/96)	A communication station
192381. Ranbaxy Laboratories Limited, New Delhi (1292/Del/02)	A communication apparatus for managing calls across one or more system nodes
192382. Ranbaxy Laboratories Limited, New Delhi (3661/Del/98)	A process for the carbonylation of a reactant selected from an alkyl alcohol a reactive derivative thereof or a mixture of a carboxylic acid and the ester thereof
192383. CSIR, New Delhi (2056/Del/95)	A continuous process for preparing aromatic carboxylic acids and a reactor apparatus therefor
192384. CSIR, New Delhi (1533/Del/95)	An improved process for thermally cracking waste polymers to produce thermally cracked polymers
192385. Motorola Inc, USA (1613/Del/95)	A method for recovering methane from a carbonaceous material of a coal seam
192386. Motorola Inc, USA (263/Del/95)	A process for the preparation of n substituted carbamates
192387. Bp Chemicals Limited, England (878/Del/96)	A process for the preparation of nanosized hydroxyapatite
192388. Bp Corporation, USA (1531/Del/95)	A process for the preparation of novel n hydroxyalkyl containing cationic amphiphiles
192389. Bp Chemicals Limited, England (1051/Del/95)	

Contd from...9

International News

expectations. EMI chairman said that piracy in terms of downloading of songs for free via internet as well as consumers copying albums into blank CD-ROMS is a major problem for the industry.

The Economic Times, May 25, 2004

■ The website EHarmony.com patented its method for matchmaking for users seeking a 'long-term relationship that leads to marriage' based on 430 questions. The US patent No. 6,735,568 describes a method and system for identifying people who are likely to have a successful relationship' and depends on 430 questions based on psychology and statistics.

Hindustan Times, May 29, 2004

■ Morepen Labs has obtained an international patent of a new crystalline form of Atrovastatin, a cholesterol lowering drug. Atrovastatin is the largest selling drug in the world, with a market size of \$10bn. Morepen got a patent for the amorphous form of Atrovastatin last year.

The Economic Times, May 28, 2004

■ The open source Linux platform PCs of branded computer makers such as IBM, HP, HCL and Acer has shown rising sales since the past one year. A Linux machine helps a user save over Rs 3,500 when compared to a Windows-based PC. It is quite possible that users load a pirated version of Windows OS right after purchase.

The Financial Express, May 24, 2004

■ Pfizer Pharmaceuticals has criticized New Zealand's weak patent laws, arguing that the laws undermine the Government's aim to create knowledge-based economy. Although the price of publicly funded drugs have gone down, it has been at the expense of research and development, the report says.

Patent World, April 2004

Contd on...11

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192390. Bp Corporation, USA (993/Del/95)	A process for the preparation of a formulation for ready to reconstitute rice flake based product
192391. CSIR, New Delhi (376/Del/02)	An improved process for preparing low molecular weight polymer having vinyl or acrylic monomer
192392. CSIR, New Delhi (394/Del/02)	A process for the preparation of cresols
192393. CSIR, New Delhi (3324/Del/98)	An improved process for making semiconductor shallow junctions useful for the manufacture of microelectronic device
192394. CSIR, New Delhi (228/Del/02)	A process for production of heterologous proteins
192395. CSIR, New Delhi (1455/Del/95)	A process for the preparation of a polymeric composition for the controlled release of an active ingredient in response to pH
192397. CSIR, New Delhi (1351/Del/99)	A process for preparation of zirconia by plasma dissociation of zircon
192398. CSIR, New Delhi (2135/Del/95)	A process for the preparation of recoil fluid
192399. CSIR, New Delhi and Dept of Biotechnology, Ministry Of Science And Technology (2055/Del/95)	An apparatus for the treatment of infectious hospital waste
192400. CSIR, New Delhi (1096/Del/95)	Wind amplified rotor platform device
C. April 24, 2004	A device for transmitting messages
192401. CSIR, New Delhi (0188/Del/91)	
192402. The Chief Controller Research Development, Min Of Defence, New Delhi (1295/Del/95)	A method and apparatus for manufacturing cement clinker
192403. National Research Development Corporation, New Delhi (1138/Del/99)	Twin roll continuous casting device
192404. Alfred Ludwig Weisbrich, USA (1806/Del/95)	A bicycle lighting apparatus
192405. Alstom Transport Sa, France (1504/Del/95)	An improved agricultural composition
192406. Texas Industries Inc, USA (48/Del/95)	Reactor device for free flowing and higher viscosity media
192407. Usinor, France and Thyssen Stahl Aktiengesellschaft, Germany (2140/Del/95)	Magnetron
192408. Edwin Schwaller, Switzerland (244/Del/95)	A method for preparing randomly cross wound bobbin
192409. Norsk Hydro A S, Norway (1172/Del/95)	Portable water recovery and dispensing system
192410. Karl Fischer Industrieanlagen GmbH, Germany (2237/Del/95)	An improved method of preparing a cathode electrocoating composition
192411. Lg Electronics Inc, Republic of Korea (2087/Cal/96)	An end seal for vacuum envelop
192412. W Schlafhorst Ag Co, Germany (351/Cal/97)	Semiconductor supercapacitor system and method for making the same
192413. Worldwide Water Inc, USA (597/Cal/97)	A flotation reactor for the purification of liquids

Contd from...10

International News

■ The State Intellectual Property Office (SIPO) in China released the figures showing the patent applications filed in the last four years equaled the amount received in the 15 years from 1985-2000. SIPO claims that the rapid growth indicated improved IPR awareness among Chinese people and improvements to its IP legal framework.

Patent World, April 2004

■ The European Commission has decided to fine Microsoft a record 497.2 million Euro for "abusing its near monopoly in the PC operating system." The EC's competition watchdog, which has been investigating Microsoft for five years, has also ordered the technology company to disclose to its competitors, within 120 days of the ruling, the interfaces needed for their products to work with Windows OS and, within 90 days, provide a version of Windows OS without the Windows Media Player embedded.

Patent World, April 2004

■ The European Parliament has passed the Intellectual Property Rights Enforcement Directive by majority voting in favour of the Directive. The Directive has been passed to the Council of Ministers after whose approval it would take two years to implement the Directive.

Patent World, April 2004

■ The Economic and Social Research Council of UK study suggests that parallel trade of pharmaceutical drugs have a negative effect on the UK economy. Parallel trade costs the UK pharma industry 770 million pounds a year, although the net effect, once the benefit to the consumers of lower prices is taken into account, is closer to 290 million pounds.

Patent World, April 2004

■ Intellectual property owners can be forced to grant licenses to direct

Contd on...12

Contd from...11

International News

competitors if certain conditions are met. The European Court of Justice set out three conditions determining an abuse of the dominant position: "The undertaking which requested the license must intend to offer new products or services not offered by the owner of the copyright for which there is a potential consumer demand; the refusal cannot be justified by objective considerations; and the refusal is such as to reserve to the undertaking which owns the copyright the relevant market, by eliminating all competition on that market."

Copyright World, May 2004

■ The protection of IPRs in China was among the topics discussed at the US-China Joint Commission on Commerce and Trade (JCCT) meeting in April at Washington. The two delegations agreed on an action plan for strengthening IP rights in China.

Copyright World, May 2004

■ More than 200 computers have been seized in an coordinated operation called 'Operation Fastlink', targeted at the online illegal software, game, movie and music trade. With 120 searches conducted in total, across 27 US states and 10 foreign countries, operation Fastlink is the largest multinational law enforcement effort ever directed at online piracy. The confiscated computers included a haul of 30 computer servers, which functioned

as storage and distribution hub. One of the computers seized in US contained 65,000 separated pirated titles.

Copyright World, May 2004

■ The University Companies Association (UNICO), which represents all major UK universities, has come to an agreement with UK Inland Revenue which will provide a 'safe harbour' for future university spin-out companies. Following the Finance Act 2003 the popularity of spin-out research companies suffered slightly, as founder academics risked paying income tax on shares issued to them. The Memorandum of Understanding that has now been reached will allow academics to delay paying tax on share gains until they cash in their shares.

Patent World, May 2004

Contd from...5

OECD's Blueprint for

strong IPR and private, market oriented investments can be complementary in reducing social costs and improving innovation. Connectivity, excellence and focus have become essential to the success of any company, university or nation. While bringing out the importance of academia-industry government linkages, OECD sees a significant role for IPR in making such a linkage meaningful. As expected, there is strong advocacy for data exclusivity in case of drugs/ medicines which must be afforded regardless of the existence of patent protection for the product.

Contd from...6

Litigation Watch.....

damages provision awarded and remanded the decision for a determination of Monsanto's "actual damages".

Patent World, May 2004

■ An award to a former researcher, Mr. Masao Iwata, who invented a method for making permanent magnets has been raised by the Tokyo High Court for approximately 1.35 million yen. Both the researcher and Hitachi Metals had appealed the earlier decision to award Mr. Iwata 11.3 million yen. Mr. Iwata had been asking for 89 million yen.

Patent World, May 2004

■ Video conferencing company, Forgent has filed suit against 31 companies, including Apple, IBM, Adobe, Gateway and Xerox, alleging that a patent it acquired through its purchase of Compression Labs has been infringed. The patent relates to the compression, manipulation and transmission of JPEG (Joint Photographic Experts Group) images.

Patent World, May 2004

■ Two Mumbai based gaming companies- Indiagames.com and Mauj.com, are fighting a pitched battle at court about a cricket game. Indiagames.com has filed a petition against Mauj.com for infringing its copyright on the game 'Cricket one day series 2003' due to stealing of the source code by two of its former employees, who are now working with Mauj.

The Economic Times, May 5, 2004

Please send us questions and topics you would like to see in the coming issues

NEXT ISSUE

- Case Study
- Case Law
- Patents for Opposition

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