

PATENT PATHWAYS
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At the Colloquium I will present preliminary results from my new study, Patent Pathways. This study expands upon the attached paper, in particular Section IV, in which I describe several specific patent pathways that high-tech patents have traversed. The new study puts these anecdotes in context by providing a comprehensive analysis of the wide variety of routes patents have taken. It draws upon several sources of data that together comprise the “patent record” - issuance and maintenance fee data, entity size data, and conveyance data – and hand-coding of the various entities holding patents - to trace the pathways of a large sample of patents - from birth, through transfer, to litigation, or retirement of the patents.

Studying the patent record can provide empirical insight into two important patent debates. The first is about the value of patents. A prevailing view is that though many patents issue, few patents - namely those in the chemical and biological areas - actually further the patent system’s aim of encouraging innovation. While patents in these areas help companies make decisions about research and development, there is a sense that the overwhelming majority of patents in other technology areas do not provide stronger incentives for innovation than those that naturally drive firms (profit motive). The other benefits of patents are arguably expensive, for the value that is provided. For example, though an arsenal of high-tech patents can help to keep a company out of court, there are other reasons companies don’t sue each other, and the expense of obtaining and maintaining a large patent portfolio is sizeable. In addition, although patents held by entrepreneurs are thought to signal value to investors, a startup company’s patent portfolio is arguably as much an indicator of the quality of a company’s patent counsel than of the quality of its inventions. The activities of patent assertion entities, who typically license and litigate the patents of others, are likewise removed from innovation and the commercialization of inventions.

This sense of the limited value of most patents is fueled by a lack of empirical understanding about how patents are used by innovators. While the small percentage of patents that are litigated has been studied extensively, very little is known about the remaining 99% of patents. Yet patents create tradeable rights that make it easier for parties to engage in discussions about technology and make deals to share or transfer it, towards the patent's highest and best use. While the role of patents in technology markets has been heavily theorized, these theories suffer from a paucity of empirical data. The estimate that 5% of patents is licensed is just that, an estimate, that lacks granularity or any sense of the different ways in which different industries, and different types of patent owners, use their patents, as companies are by and large are not required and do not make their licensing transactions public.

In contrast, many (though by far not all) patent purchases are recorded publicly in the patent office, in order to secure the buyer's rights over later comers. By studying this public patent record, this paper provides a glimpse into the technology market. Each assignment record details the patents that have been sold, from and to whom, and under what conditions. While technology may be transferred through licensing, rather than sale, the volume and shape of patent transactions nonetheless provides a view of this portion of the technology market.

The patent record also includes several other sources of valuable information that provide insight into the private value that patents confer. Patents must be renewed on a regular basis. Yet many owners chose not to renew their patent, presumably because the value of the patent is less than the cost of renewal. In addition, financial and other transactions in which patents comprise collateral are often recorded at the patent office. The acts of renewing and recording financial transactions involving patents provide additional indications regarding the value of patents, including when, to whom they are valuable, and for what reason.

The study of assignments may also provide predictive value into the likelihood that a patent will be litigated. Over the past few years, the patent marketplace has flourished, buoyed by the development of new business models for exploiting patents. Patent assertion entities, which use patents primarily to

obtain licensing fees rather than to support the development or transfer of technology, often assert the patents of others. In addition, Lemley and Allison have found that patents that issue to certain types of first owners are more likely to be litigated than those issued to other types of first owners. However, the identity of the contemporary owner of a patent, or how often it has been transferred, may be even more closely correlated to whether the patent is to be litigated. To the extent that patent ownership is predictive of litigation, it is worth understanding this relationship in order, potentially, to avoid areas where litigation is most likely.

The study of assignments also provides empirical fodder to the debate about patent disclosure. Patents impart technical information, in the form of the patent specification, to the public. But the patent record - including who owns a patent, what transactions the patent has been involved in, and related, the patents that cover a particular product - provide another sort of disclosure to the public. This information is produced after the patent has issued, and as such, is more relevant and more closely tied to commercialization and actual use of the patent than the patent document itself. If the practice of patentees is any indication, this information is both valuable in itself and also boosts the value of the patent specification, a fact that has been largely overlooked by academics and policymakers. While the extent to which researchers learn technical information from patent specifications in isolation is likely quite limited, the practice of researching companies and learning about them and their technology by looking at their patent filings, is well-established and widely practiced. Conversely, companies that want to hide their patent activities can do so, because of relaxed recordation requirements and the ease with which corporate identities can be created and obscured. The “troll” model exploits the laxity of recording requirements, enabling companies that want to increase hold-up to do so by failing to record assignments or recording to shell companies. By studying the accuracy and accessibility of the patent assignment record, with respect to who owns what patents, this commercial disclosure function of the patent system can be evaluated.

This project is in the early stages and I very much welcome your input and ideas. Although I will reserve the presentation of data until the colloquium, I have included a few “props” that I will discuss during the presentation. Appendix I represents the assignment record of a patent that Intellectual Ventures sued on a few months ago, and an article about the suit. Appendix II represents the current maintenance fee schedule. Appendix III is a form that is used by patentees to record “conveyances” – patent sales and other testamentary acts at the patent office.

APPENDIX I



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Patent Assignment Abstract of Title

NOTE: Results display only for issued patents and published applications. For pending or abandoned applications please consult USPTO staff.

Total Assignments: 9

Patent #: [5987610](#) **Issue Dt:** 11/16/1999 **Application #:** 09022512 **Filing Dt:** 02/12/1998

Inventors: EDWARD J. FRANCZEK, JOHN THOMAS BRETSCHER, RAYMOND WALDEN BENNETT III

Title: COMPUTER VIRUS SCREENING METHODS AND SYSTEMS

Assignment: 1

Reel/Frame: [009220/0359](#) **Recorded:** 05/18/1998 **Pages:** 7

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignors: [FRANCZEK, EDWARD J.](#) **Exec Dt:** 03/12/1998
[BRETSCHER, JOHN THOMAS](#) **Exec Dt:** 03/17/1998
[BENNETT, RAYMOND WALDEN III](#) **Exec Dt:** 03/27/1998

Assignee: [AMERITECH CORPORATION](#)
BRUCE STUCKMAN - 4H80 - LEGAL DEPARTMENT
2000 W. AMERITECH CENTER DR.
HOFFMAN ESTATES, ILLINOIS 60196

Correspondent: AMERITECH CORPORATION
BRUCE E. STUCKMAN
LEGAL DEPARTMENT - 4H80
2000 W. AMERITECH CENTER DRIVE

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[BENNETT, RAYMOND WALDEN III](#)

Exec Dt: 03/27/1998

Assignee: [AMERITECH CORPORATION](#)

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Correspondent: AMERITECH CORPORATION

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2000 W. AMERITECH CENTER DRIVE
HOFFMAN ESTATES, IL 60196-1025

Assignment: 2

Reel/Frame: [013974/0542](#)

Recorded: 04/25/2003

Pages: 55

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: [AMERITECH PROPERTIES, INC.](#)

Exec Dt: 06/26/2002

Assignee: [SBC HOLDINGS PROPERTIES, L.P.](#)

645 EAST PLUMB LANE
RENO, NEVADA 89502

Correspondent: GREENBLUM & BERNSTEIN, P.L.C.

BRUCE H. BERNSTEIN
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

Assignment: 3

Reel/Frame: [013986/0525](#)

Recorded: 04/25/2003

Pages: 55

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: [AMERITECH CORPORATION](#)

Exec Dt: 06/26/2002

Assignee: [AMERITECH PROPERTIES, INC.](#)

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RENO, NEVADA 89502

Correspondent: GREENBLUM & BERNSTEIN, P.L.C.

BRUCE H. BERNSTEIN
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

Assignment: 4

Reel/Frame: [014015/0689](#)

Recorded: 04/25/2003

Pages: 63

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: [SBC HOLDINGS PROPERTIES, L.P.](#)

Exec Dt: 06/26/2002

Assignee: [SBC PROPERTIES, L.P.](#)

645 EAST PLUMB LANE
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1950 ROLAND CLARKE PLACE
J328011
RESTON, VA 20191

Assignment: 5

Reel/Frame: [017215/0420](#)

Recorded: 02/27/2006

Pages: 7

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: [SBC INTELLECTUAL PROPERTY](#)

Exec Dt: 02/03/2003

Assignee: [THE BOARD OF REGENTS OF THE UNIVERSITY OF TEXAS SYSTEM](#)

201 WEST 7TH STREET
AUSTIN, TEXAS 78701

Correspondent: MARY E. MCNEILL-SMITH
6500 RIVER PLACE BLVD.
BLDG, III, 1ST FLOOR
AUSTIN, TX 78730

Assignment: 6

Reel/Frame: [017663/0126](#)

Recorded: 03/13/2006

Pages: 2

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: [BOARD OF REGENTS OF THE UNIVERSITY OF TEXAS SYSTEM, THE](#)

Exec Dt: 02/16/2005

Assignee: [VERVE L.L.C.](#)

8127 MESA DRIVE #B-206-67
AUSTIN, TEXAS 78759

Correspondent: SPRINKLE IP LAW GROUP
1301 W. 25TH STREET
SUITE 408
AUSTIN, TX 78705

Assignment: 7

Reel/Frame: [018951/0538](#) Recorded: 03/05/2007 Pages: 4

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: [VERVE, L.L.C.](#) Exec Dt: 10/26/2006

Assignee: [AUCTNYC 8 LLC](#)
2711 CENTERVILLE ROAD
SUITE 400
WILMINGTON, DELAWARE 19808

Correspondent: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

Assignment: 8

Reel/Frame: [018505/0568](#) Recorded: 11/13/2006 Pages: 2

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: [SBC PROPERTIES, L.P.](#) Exec Dt: 11/10/2006

Assignee: [SBC INTELLECTUAL PROPERTY](#)
6100 NEIL ROAD
SUITE 500
RENO, NEVADA 89511

Correspondent: MARY E. MCNEILL-SMITH
6500 RIVER PLACE BLVD
BLDG III, 1ST FLOOR
AUSTIN, TX 78730

Assignment: 9

Reel/Frame: [025467/0043](#) Recorded: 12/07/2010 Pages: 6

Conveyance: MERGER (SEE DOCUMENT FOR DETAILS).

Assignor: [AUCTNYC 8 LLC](#) Exec Dt: 12/07/2010

Assignee: [INTELLECTUAL VENTURES I LLC](#)
2711 CENTERVILLE RD, SUITE 400
WILMINGTON, DELAWARE 19808

Correspondent: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

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THE WALL STREET JOURNAL
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TECHNOLOGY | DECEMBER 9, 2010

Big Patent Firm Sues Nine Tech Firms

By [DON CLARK](#) And [DIONNE SEARCEY](#)

(See Corrections & Amplifications item [below](#).)

Technology companies on Wednesday received troubling news that some had feared for years: Intellectual Ventures LLC has started suing.

The secretive firm co-founded by former [Microsoft](#) Corp. Chief Technology Officer Nathan Myhrvold has raised \$5 billion to amass thousands of patents over the past decade.

Unlike most specialists in the field, Intellectual Ventures has avoided litigation, persuading big tech companies to become investors in his firm—along with payments that sometimes came to hundreds of millions of dollars. But Mr. Myhrvold never ruled out lawsuits if negotiations failed.

But on Wednesday, Mr. Myhrvold's firm, unable to secure payments from nine companies, announced three patent-infringement suits. One suit names the best-known players in security software—[Symantec](#) Corp., [McAfee](#) Inc., [Trend Micro](#) Inc. and [Check Point Software Technologies](#) Ltd.

Patent Power

What is Intellectual Ventures?

Business: Extracting value from patents, which the firm buys and licenses as well as patenting its own inventions

Headquarters: Bellevue, Wash.

Founded: 2000

Co-founders: Nathan Myhrvold, Microsoft's former chief technology officer, and Edward Jung, Microsoft's former chief architect

Funding: \$5 billion

Investors: Technology companies that include Microsoft, Intel, Google, eBay, SAP and Nvidia, plus investment firms such as Charles River Ventures

Portfolio: 30,000 patents and applications

Employees: 760; 20% are scientists/engineers and 10% are lawyers

Intellectual Ventures, WSJ Research

The suits, all filed in federal court in Delaware, seek unspecified damages. The move comes on the heels of a raft of patent lawsuits among tech firms that has entangled numerous high-profile companies both as defendants and plaintiffs.

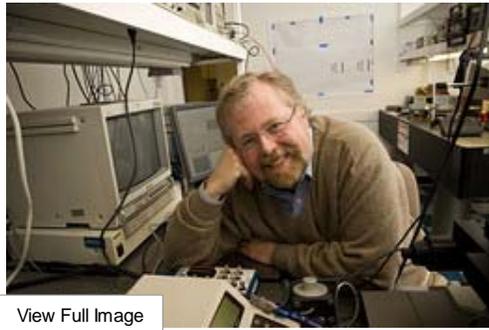
Intellectual Ventures, which is based in a Seattle suburb and claims 30,000 patents and patent applications, is believed to have the largest portfolio among firms that don't make or sell products. It claims to have earned nearly \$2 billion from licensing its patents.

"This is setting up perhaps the biggest battle in the history of the patent system," said Jerry Hosier, a patent attorney in Aspen, Colo. "Every company you can think of in the information technology space is a target" of Intellectual Ventures.

The firm discloses few details of its deals with licensees or investors. But people familiar with the situation have listed companies that include Microsoft, [Intel](#) Corp., [Cisco Systems](#) Inc. and [Google](#) Inc. as investors. They are believed to receive a

shield against some potential litigation by the firm, but the breadth of the indemnification and how long it lasts aren't known.

"It's a pretty significant wake-up call for Silicon Valley companies that the threat of this type of massive litigation is real and it's not going away anytime soon," said Bijal Vakil, an intellectual-property attorney with the firm White & Case LLP.



[View Full Image](#)

Zuma Press

Nathan Myhrvold, CEO of Intellectual Ventures.

In one of the suits filed Wednesday, Intellectual Ventures targets [Elpida Memory Inc.](#) and [Hynix Semiconductor Inc.](#), major makers of memory chips. A third focuses on programmable semiconductors, focusing on [Altera Corp.](#), [Lattice Semiconductor Corp.](#) and [Microsemi Corp.](#)

Symantec, McAfee, Trend Micro, Check Point, Microsemi, Altera and Elpida declined comment, pending review of the litigation. The other defendants didn't immediately respond to requests for comment.

The litigation is likely to further inflame a heated debate in technology circles about the role of patents and firms that have

been formed to monetize them.

Mr. Myhrvold has been an outspoken defender of existing patent laws, and styles his firm as a global leader in "the business of invention." His stance has put him at odds with some big companies, including Microsoft and Intel, that have pushed for changes in patent laws.

One of few clear differences between Intellectual Ventures and other licensing firms—sometimes derided as "patent trolls"—had been its strategy of avoiding litigation. Now that distinction is gone.

"We can't control the way people view the company or how they label it," said Melissa Finocchio, who joined Intellectual Ventures in May as chief litigation counsel.

"Litigation is just a fact of life in the high-tech world," she said. The firm "has always tried to make it clear that while we don't think litigation is the most efficient way to monetize patents," it has "recognized it as a tool we have at our disposal."

Ms. Finocchio added that the firm only resorted to litigation after lengthy negotiations with the defendants--in some cases stretching for more than a year-- failed to yield licensing agreements. She said Intellectual Ventures had success recently in landing some big licensees without litigation, including Samsung Electronics Co. and [HTC Corp.](#)

The threat posed by Intellectual Ventures helped prompt the rise of firms like RPX Corp. It is paid by companies to buy up potentially threatening patents; the companies receive licenses to those patents, and RPX pledges never to sue over them.

John Amster, who worked at Intellectual Ventures before co-founding RPX, said he wasn't surprised by the suits: He said that companies who were sued in the latest action have likely been preparing legal defenses. "I think that most of [the defendants] believed this was going to happen and they have been thinking about ways to deal with it."

Corrections & Amplifications

About 10% of the employees at Intellectual Ventures LLC are lawyers. A chart accompanying an earlier version of this story incorrectly said that 20% to 30% of its employees are lawyers.

Write to Don Clark at don.clark@wsj.com and Dionne Searcey at dionne.searcey@wsj.com

APPENDIX II

<http://www.uspto.gov/web/offices/ac/qs/ope/fee2009september15.htm#maintain>

Patent Maintenance Fees

1551/2551 1.20(e)	Due at 3.5 years	980.00	490.00
1552/2552 1.20(f)	Due at 7.5 years	2,480.00	1,240.00
1553/2553 1.20(g)	Due at 11.5 years	4,110.00	2,055.00

APPENDIX III

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Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input type="checkbox"/> No		Street Address: _____	

3. Nature of conveyance/Execution Date(s):		City: _____	
Execution Date(s) _____		State: _____	
<input type="checkbox"/> Assignment <input type="checkbox"/> Merger		Country: _____ Zip: _____	
<input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name		Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Joint Research Agreement			
<input type="checkbox"/> Government Interest Assignment			
<input type="checkbox"/> Executive Order 9424, Confirmatory License			
<input type="checkbox"/> Other _____			
4. Application or patent number(s): <input type="checkbox"/> This document is being filed together with a new application.			
A. Patent Application No.(s) _____		B. Patent No.(s) _____	
Additional numbers attached? <input type="checkbox"/> Yes <input type="checkbox"/> No			
5. Name and address to whom correspondence concerning document should be mailed:		6. Total number of applications and patents involved: _____	
Name: _____		7. Total fee (37 CFR 1.21(h) & 3.41) \$ _____	
Internal Address: _____		<input type="checkbox"/> Authorized to be charged to deposit account	
_____		<input type="checkbox"/> Enclosed	
Street Address: _____		<input type="checkbox"/> None required (government interest not affecting title)	
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City: _____		Deposit Account Number _____	
State: _____ Zip: _____		Authorized User Name _____	
Phone Number: _____			
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