



Oregon Patent Report:

A View of Patent Activity from 2008–2010

Prepared by



www.stoel.com/intellectualproperty

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The 2008-2010 Oregon Patent Report, as well as patent reports for other states in the region are available online at **www.stoel.com/patentreports**.

The Stoel Rives Technology & Intellectual Property Group also publishes the Oregon Patent Litigation Tracker blog at **www.oregonpatentlitigation.com**.

This blog tracks and reports on active patent cases in the United States District Court for the District of Oregon.



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I. Executive Summary

After two down years, patent activity in Oregon bounced back in 2010. This bounce back is attributed to ongoing technological innovation in the state, companies' greater efforts to patent business innovations, the U.S. Patent and Trademark Office's (USPTO) push to reduce a mountainous backlog and an uptick in patent applications filed during better times, among other factors.

The number of patents issued to corporate and individual inventors in the state rose a healthy 18.1 percent to a four-year high of 2,957 in 2010, compared with drops of 7.5 percent in 2009 and 4.4 percent in 2008.

Local corporate counsel and intellectual property experts interviewed for this report credited the improvement to continued growth of technological innovation by established companies and startups doing business in the state, as well as more companies using patents to protect their inventions. That innovation was led by Intel Corp., which maintained its place as the state's top private employer and patent awardee.

"We continue to see a strengthening of the innovation ecosystem in Oregon," says Wally Van Valkenburg, managing partner of the Portland office of Stoel Rives LLP and chair of the Oregon Business Development Commission. "Whether it's coming from world industry leaders like Intel and Nike, increased university focus on research commercialization, or early stage companies taking the research to market, there is a tremendous volume of business activity here that is tied to intellectual property."

Long patent application processing times at the USPTO also contributed to the increase. Patents awarded during 2010 spent an average of 35.3 months in the agency's review process, according to USPTO data. That pendency meant many of the patents awarded last year were filed in 2007, when the economy was still booming and companies were still spending on research and development (R&D) and patent filings.

Improved patent activity in the state mirrored nationwide trends. In 2010, the number of patents awarded to all U.S. inventors rose 27.5 percent to 121,179, compared with only a 3.3 percent increase in 2009 and a 1.8 percent drop in 2008.

The number of utility patents granted in the United States in 2010 rose 31 percent to a record 219,614, an achievement that local patent attorneys and corporate counsel attributed partly to more applications being filed, but also to the USPTO's efforts to reduce an application backlog that has plagued the agency for almost a decade.

In Oregon, the economy is inching out of the recession, albeit slowly and without significant



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new employment. However, local legal experts believe even a modest recovery could lead to a further boost to patent activity at companies that held off investing in much new R&D while times were tough.

The USPTO has set a public goal of reducing application lag time to 20 months by 2015.¹ If improvements come to pass, a shorter examination period could result in even more patents being issued on an annual basis, in Oregon and throughout the country. Businesses are more likely to file applications with better certainty that the USPTO will examine and issue the patents promptly, says John Rafter, Jr., a partner in Stoel Rives' Technology and Intellectual Property Group. "Companies are more apt to invest in IP when there is greater predictability of timing and outcome."

Additional highlights of Oregon patent activity in the past three years:

- From 2008 to 2010, most patents were issued to Oregon-based inventors in the areas of computer science and business methods, mechanical devices, computer hardware and semiconductor manufacturing.
- During the past three years, the state's top patent awardees remained fairly constant, with Intel, Hewlett-Packard Co. L.P., Nike, Inc., Xerox Corp. and IBM heading the list in 2010.
- In 2010, Oregon ranked 15th in the country in the number of patents issued to state residents, down from 14th in 2009 and 13th in 2008. However, on a per capita basis, Oregon continues to rank approximately eighth in the nation for patents issued.
- In 2010, patents issued to Oregon inventors accounted for 2.4 percent of all patents issued to grantees of U.S. origin, dropping slightly from 2.6 percent in 2009 and 2.9 percent in 2008.

¹ <http://www.uspto.gov/dashboards/patents/main.dashxml>

2010 Top Patent Awardees

Company or Organization	Number of Patents
Intel Corp.	700
Hewlett-Packard Development Co., L.P.	231
Nike, Inc.	184
Xerox Corp.	122
IBM	79

2009 Top Patent Awardees

Company or Organization	Number of Patents
Intel Corp.	627
Hewlett-Packard Development Co., L.P.	224
Nike, Inc.	129
Micron Technology, Inc.	97
Xerox Corp.	63
IBM	63

2008 Top Patent Awardees

Company or Organization	Number of Patents
Intel Corp.	688
Hewlett-Packard Development Co., L.P.	226
Nike, Inc.	210
Micron Technology, Inc.	103
Xerox Corp.	55



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II. Introduction and Approach

The 2010 Oregon Patent Report provides a snapshot of the state's patent activity during 2008 to 2010. Among other things, the report:

- Analyzes Oregon's recent patent activity.
- Compares Oregon's patent activity with national trends.
- Provides statistical information on patent activity in nine invention categories in the state.
- Examines the economic health of Oregon's technology sector, the source of many Oregon patents.
- Identifies the top 20 Oregon patent awardees overall in 2008 to 2010, and the top five patent awardees in each invention category in 2010.

The 2010 Oregon Patent Report is based on raw data from the USPTO² that patent attorneys from Stoel Rives analyzed, categorized and ranked.

Stoel Rives is a business law firm providing corporate and litigation services to clients throughout the United States. Established in 1907, the firm has nearly 400 attorneys in 11 offices in seven states. A leader in corporate, intellectual property, energy, environmental, labor, technology and other legal specialties, Stoel Rives represents public and private enterprises, including businesses at all stages of growth, from startups to multinational public companies.

For more than 25 years, the Stoel Rives Technology & Intellectual Property Group has been representing market leaders on IP matters including patent, trademark, copyright, and related infringement and licensing issues. The firm's patent and IP lawyers understand that patents count among a company's most valuable assets, and therefore, this group strives to provide the business communities in which it operates with tools to keep them abreast of laws and trends affecting their IP protection rights. In addition to the Oregon Patent Report, the group also publishes similar reports in other states throughout the region, and the Oregon Patent Litigation Tracker blog at www.oregonpatentlitigationtracker.com.

Stoel Rives is ranked among the top 30 U.S. law firms for the number of national first-tier practice areas, according to the *U.S. News – Best Lawyers*[®] "Best Law Firms" 2010 survey. In 2010, The BTI Consulting Group rated the firm among the nation's 30 best for outstanding client service. In addition, 90 Stoel Rives lawyers have been rated among the best in their practice areas by Chambers USA: America's Leading Lawyers for Business.

2 <http://www.uspto.gov>



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Tallying and Ranking Patents by Company

U.S. patents are awarded to individual inventors. However, most patents cover technologies developed within the scope of an inventor's employment and, as a result, are contractually assigned to their employer. Employer assignees are identified on a patent and are almost always companies. Based on assignee data, the 2010 Oregon Patent Report tallies patents by company name when available, and ranks companies and individuals that received patents in 2008 to 2010.

The USPTO and Stoel Rives calculate Oregon patents differently in two ways. The USPTO considers Oregon patents to be only those for which the first inventor named in a patent is from Oregon. Also, the USPTO includes patent reexaminations in its annual totals. By contrast, Stoel Rives includes in its annual report any patent that names one or more Oregon inventors, regardless of where those names appear on the patent. Further, Stoel Rives does not include reexaminations in its calculations.

Some companies in this report, such as Intel, Hewlett-Packard and IBM, have facilities outside Oregon. Patent statistics for such companies were included if any patents they received identified at least one inventor as residing in Oregon, even if the company had no substantial operations here.

Percentages in the report are rounded to the nearest tenth.

More information about USPTO calculations is available in the agency's Patenting Trends reports for 2010,³ 2009⁴ and 2008,⁵ all of which can be found online.

3 http://www.uspto.gov/web/offices/ac/ido/oeip/taf/pat_tr10.htm

4 http://www.uspto.gov/web/offices/ac/ido/oeip/taf/data/pat_tr09.htm

5 http://www.uspto.gov/web/offices/ac/ido/oeip/taf/data/pat_tr08.htm



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III. National Patent Trends

In 2010, the total number of U.S. patents issued by the USPTO jumped 27.3 percent to 244,358 – another sign of the strength of the economy when applications for those grants were originally filed. The increase was the largest single-year jump in patents issued in at least a decade, surpassing a 24.5 percent rise registered in 2006. The substantial uptick in total patents issued comes in sharp contrast to single-digit increases registered in 2009 (3.6 percent) and 2008 (1.3 percent).

Oregon patent attorneys and corporate counsel attribute at least part of the increase in patents issued to efforts inside the USPTO spearheaded by Director David Kappos to trim the agency's application backlog. Early efforts toward that end appear to be working. In 2010, the USPTO's overall backlog of patent applications decreased by 1.3 percent, to 721,831⁶, according to agency data. That decrease followed a 3.9 percent dip in 2009. In January, Kappos testified before the House Judiciary Committee's subcommittee on intellectual property, competition and the Internet that he hopes to reduce the backlog to approximately 658,000⁷ in fiscal 2011, which ends September 30.

Over the past two decades, the share of U.S. patents issued to U.S. inventors has steadily declined as more foreign companies applied for and received patents here. In 2010, more than half of all patents issued (50.4 percent) went to foreign inventors, continuing a trend that started in 2008.

Last year, the increase in patents issued to U.S. resident inventors was virtually identical to the increase in overall patents issued. In 2010, the USPTO issued 121,179 patents to U.S. inventors, a 27.5 percent increase from 2009. That year, patents issued to U.S. inventors increased 3.3 percent to 95,037, and in 2008, patents issued to U.S. inventors decreased slightly (1.8 percent) to 92,001.

6 <http://www.uspto.gov/dashboards/patents/kpis/kpiBacklogDrilldown.kpixmap>

7 http://www.uspto.gov/news/speeches/2011/kappos_house_hearing.jsp



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State Patent Breakdown

Within the United States, Oregon remains in the top tier of states whose residents received patents, but has seen its standing within those elite ranks slip slightly over the past three years. In 2010, the state ranked 15th in the nation⁹ based on the number of patents awarded to inventors or companies based here. In 2009, Oregon ranked 14th, and in 2008 it was 13th.

Even with that small drop, Oregon makes a respectable showing for a state that places 27th in the country in overall population, with 3.8 million residents,¹⁰ or about 1.2 percent of the country's total, according to U.S. Census Bureau figures for 2009.

Based on its relatively small size, Oregon ranks eighth in the nation on a per capita basis for patents issued, not far behind Washington, which comes in at No. 1 on a per capita basis due mainly to the strength of Microsoft Corp. In April 2010, Stoel Rives patent attorney and partner Kassim Ferris was quoted in the *Oregonian* as being upbeat about Oregon's economy,¹¹ and close to a year later, he continues to be optimistic. "Oregon's relatively high ranking is reflective of its vibrant technology sector and its prominence as a creative design center," Ferris says.

In 2010, California topped all other states for patents issued to residents or companies based there, an honor it has claimed for at least the past three years. The state, which has 39.9 million residents, or approximately 12 percent of the U.S. population, received 30,080 patents in 2010, up almost 29 percent from 2009, and a 35.5 percent increase from 2008.

In 2010, other top-ranked states based on the number of patents issued to residents or companies were New York, Texas, Washington, Massachusetts, Illinois, New Jersey and Michigan.

Patents Issued to U.S. Resident Inventors*		
Year	Patents	Percentage Change
2010	121,179	27.5
2009	95,037	3.3
2008	92,001	-1.8
2007	93,690	-8.3
2006	102,267	23.8
2005	82,586	-12.3
2004	94,128	-4.5
2003	98,590	1.5
2002	97,124	-1.5
2001	98,655	1.7
2000	97,011	3.1

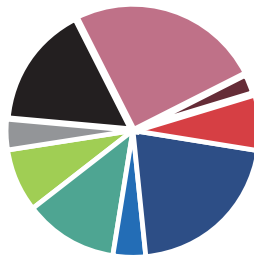
* Includes reissues Source: USPTO⁸

8 2009 and 2010 statistics came from http://www.uspto.gov/web/offices/ac/ido/oeip/taf/pat_tr10.htm and earlier statistics came from http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cst_all.htm

9 Oregon's rank is based on Stoel Rives' analysis of USPTO Patent Trends annual reports.

10 <http://quickfacts.census.gov/qfd/states/41000.html>

11 http://www.oregonlive.com/business/index.ssf/2010/04/intel_researcher_leads_oregons.html



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Top States by Patents Awarded 2010	
State and Rank	Number of Patents
1. California	30,080
2. New York	8,095
3. Texas	8,027
4. Washington	5,810
5. Massachusetts	5,261
6. Illinois	4,374
7. New Jersey	4,345
8. Michigan	4,277
9. Minnesota	4,005
10. Ohio	3,983
11. Pennsylvania	3,889
12. Florida	3,724
13. North Carolina	2,922
14. Colorado	2,436
15. Oregon	2,340*
16. Wisconsin	2,232

Top States by Patents Awarded 2009	
State and Rank	Number of Patents
1. California	23,354
2. Texas	6,436
3. New York	6,127
4. Washington	4,856
5. Massachusetts	4,038
6. Illinois	3,615
7. Michigan	3,516
8. New Jersey	3,259
9. Pennsylvania	3,066
10. Ohio	3,023
11. Minnesota	2,972
12. Florida	2,899
13. North Carolina	2,298
14. Oregon	2,014
15. Colorado	1,968
16. Wisconsin	1,887

* USPTO data includes only first-named inventors, so the total is less than Stoel Rives' information.
 Source: *Patenting Trends, Calendar Year 2010*,¹² USPTO

Source: *Patenting Trends, Calendar Year 2009*,¹³ USPTO

Top States by Patents Awarded 2008			
State and Rank	Number of Patents	State and Rank	Number of Patents
1. California	22,203	9. Ohio	3,156
2. Texas	6,184	10. Minnesota	2,869
3. New York	5,905	11. Pennsylvania	2,850
4. Washington	4,158	12. Florida	2,808
5. Massachusetts	3,897	13. Oregon	2,173
6. Michigan	3,584	14. North Carolina	2,157
7. Illinois	3,581	15. Wisconsin	1,921
8. New Jersey	3,247	16. Colorado	1,868

Source: *Patenting Trends, Calendar Year 2008*,¹⁴ USPTO

12 http://www.uspto.gov/web/offices/ac/ido/oeip/taf/pat_tr10.htm

13 http://www.uspto.gov/web/offices/ac/ido/oeip/taf/data/pat_tr09.htm

14 http://www.uspto.gov/web/offices/ac/ido/oeip/taf/data/pat_tr08.htm



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Patent Applications Could Level Off

Despite the increase in patents issued in 2010, local legal experts aren't ready to predict a similar increase in the number of patent applications filed. The USPTO will release complete 2010 patent application filings in April. Ferris believes applications filed in 2010 will be somewhat level relative to 2009. Information from the USPTO online public database bears this out, he says.

If applications did increase in 2010, they will have reversed a one-year dip in 2009 that saw overall filings fall by less than 1 percent, to 482,871 from 485,312 in 2008. The decrease in applications in 2009 was the first in more than a decade.

Just as more foreign companies are being issued U.S. patents, more foreign entities are filing patent applications, led by China, which saw the number of U.S. patents it received jump 21.1 percent in 2009, following a 51.7 percent increase in 2008. According to a recent Thomson Reuters study¹⁵ reported in the *New York Times*, China could overtake the United States and Japan in worldwide patent application filings this year.

For the first time ever, in 2009 foreign entities filed more patent applications than U.S. companies and individual inventors, accounting for 50.7 percent¹⁶ of all applications filed, compared with 49.3 percent in 2008.

U.S. Patent Applications			
Year	Total U.S. Utility Patent Applications	U.S. Origin Utility Patent Applications	Percent of U.S. Origin Utility Patent Applications
2010	NA*	NA*	NA*
2009	456,106	224,912	49.3
2008	456,321	231,588	50.7
2007	456,154	241,347	52.9
2006	425,967	221,784	52.1

* Statistics available in April 2011¹⁷

Source: U.S. Patent Statistics Chart, Calendar Years 1963–2010,¹⁸ USPTO

15 <http://economix.blogs.nytimes.com/2010/10/06/china-poised-to-lead-world-in-patent-filings/>

16 http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm

17 http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm - Finalized total application counts should be available in April and application breakouts by origin will be available in mid-summer

18 http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm



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USPTO Addresses Pendency Lags

Pendency, the amount of time it takes a patent to work its way through the USPTO examination process and be approved or denied, continues to be an issue, although the agency is taking steps to improve it.

The backlog of patent applications has been especially troubling and “stands as a barrier to innovation and economic growth,” USPTO Director Kappos said in a recent speech.¹⁹

Despite efforts to streamline the process, pendency has gotten worse, not better. At the end of 2010, the average wait for a patent application was almost three years (34.9 months)²⁰. It had not changed substantially since 2009 (34.8 months) and was up slightly from 2008 (33.5 months).

The USPTO has taken a series of steps toward a publicly stated goal of reducing pendency to 20 months by 2015.²¹ Those steps include:

- **Expediting review of certain classes of patent applications.** To help spur innovation and create jobs, the USPTO announced in late 2009 fast-track status for patent applications covering green technology.²² The pilot program covers 3,000 patent applications already on file and has been extended to December 31, 2011.
- **Adding examiners.** The USPTO added 276 patent examiners²³ to its staff in 2010, for a total of 6,369, and plans to add more in 2011.
- **Opening field offices.** This year, the USPTO will open its first ever satellite office²⁴ in Detroit, with a staff of 100, including patent examiners. If the satellite location proves successful, USPTO officials say they may open additional branch offices in the future.
- **Improving technology.** The agency is revamping its information-technology infrastructure to speed patent application processing and improve search quality, according to Kappos. Part of that is accepting patent applications electronically. By the end of 2009, 82.5 percent²⁵ of all patent applications were e-filed, up from 72.1 percent in 2008²⁶ and only 2 percent in 2005.
- **Working with foreign patent offices.** The USPTO and patent offices in Europe and Japan²⁷ are developing plans to reuse work on applications filed with both agencies.

Overall Pendency	
Fiscal Year	Average Total Months of Pendency
2010	34.9
2009	34.8
2008	33.5

Source: USPTO

19 http://www.uspto.gov/news/speeches/2010/Kappos_CAP_speech.jsp
 20 <http://www.uspto.gov/dashboards/patents/kpis/kpiOverallPendency.kpixml>
 21 <http://www.uspto.gov/dashboards/patents/main.dashxml>
 22 <http://www.californiagreensolutions.com/cgi-bin/gt/tpl.h,content=3696>
 23 http://www.uspto.gov/news/speeches/2011/kappos_house_hearing.jsp
 24 http://www.uspto.gov/news/pr/2010/10_65.jsp
 25 http://www.uspto.gov/web/offices/com/annual/2009/par_01.html
 26 http://www.uspto.gov/web/offices/com/annual/2008/par_01.html
 27 http://www.uspto.gov/web/offices/com/annual/2009/mda_02_02.html



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Stoel Rives attorneys Rafter and Ferris expect the USPTO to propose additional changes. Meanwhile, Congress is moving forward with its own reforms. In March 2011, the Senate passed by a vote of 95-5 the Leahy-Hatch-Grassley America Invents Act,²⁸ a major patent system overhaul that Vermont Senator Patrick Leahy maintains will speed up the application process and improve patent quality. “In his State of the Union address, President Obama challenged the nation to out-innovate, out-build and out-educate,” Leahy said in public comments earlier in the year. “Enacting the Patent Reform Act is a key to meeting this challenge. Reforming the nation’s antiquated patent system will promote American innovation, create American jobs, and grow America’s economy.”

Companies with patent applications in the works would be wise to plan for future rule changes that could affect ongoing patent prosecution strategies, Rafter says. In one expected change, the United States could move from the first-to-invent system used here now to the first-to-file standard used by the rest of the world. If such a change comes to pass, it should prompt companies to file early and often, he says.

28 http://leahy.senate.gov/press/press_releases/release/?id=74cbf540-cc98-4172-b719-8d630e6bdf78



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IV. Oregon Patent Trends

Oregon is home to the semiconductor and technology companies of the Silicon Forest; Nike, Inc. and its fellow footwear and sporting goods makers; and the nurseries, wineries, orchards and farms that make up the state’s agriculture business. In recent years, those industries have been joined by newcomers in open-source software, smartphone applications, solar and wind power generators, and nano- and microtechnology.

After being roiled by the changing nature of those industries, a recession that saw unemployment jump to 10.6 percent and other factors during 2008 and 2009, patent activity rallied significantly in 2010 to reach a four-year high.

In 2010, patents awarded to Oregon companies jumped 18.1 percent to 2,957, compared with drops of 7.5 percent in 2009 and 4.4 percent in 2008.

Although patent activity bounced back in 2010, the total number of patents granted fell just shy of the record high of 3,104 awarded to Oregon inventors in 2006.

Among other factors, patent activity in 2010 increased due to ongoing technological innovation in the state and companies’ greater appreciation for using patents to protect their business innovations, says Steve Austin, director of intellectual property at Electro Scientific Industries,

Inc., a supplier of laser-based manufacturing solutions for the semiconductor and microtechnology industries in Portland. More businesses understand that patents go straight to the bottom line, Austin says. “They support margins, and they are valuable property in themselves that can be licensed.” Also, with mergers and acquisitions on the rise after the recession, companies realize that patent portfolios can be an important constituent of the value of their business, he says.

U.S. Patents Issued to Oregon Inventors		
Year	Patents	Annual Percent Change
2010	2957	18.1
2009	2504	-7.5
2008	2706	-4.4
2007	2831	-8.8
2006	3104	32.3
2005	2261	- 5
2004	2380	3
2003	2311	10.1
2002	2094	8.1
2001	1937	8.9
2000	1778	7.4

Source: USPTO, Stoel Rives LLP

The recession wasn’t the sole contributing factor to declines registered in 2008 and 2009, especially since, due to pendency issues, patents granted in those years entered the application pipeline close to three years prior, when the economy was more robust. The lower numbers also can be attributed to a number of large companies that either left the state or curbed employment or R&D here, according to Stoel Rives attorney Rafter.



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Oregon Patents by Invention Category

The increase in patents awarded to Oregon companies and inventors in 2010 came on a surge of activity in several of the state's largest industry sectors. The biggest gains were made by the state's computer software, Internet and business methods industry, which saw patent grants rise 27.7 percent in 2010 and a total of 29.5 percent from 2008 to 2010. Patents on general mechanical devices rose 43.9 percent in 2010 after an 11.3 percent drop the previous year, for a net gain of 27.7 percent since 2008. Computer hardware, another key sector, saw patent awards climb 10.4 percent in 2010 after a slight drop the previous year, for a two-year gain of 9.1 percent.

Though they account for a substantially smaller portion of the state's patent activity, several of the state's smaller industries also saw significant increases in patents awards from 2008 to 2010. They include life sciences and plants, which rose 31.3 percent, and chemicals and materials sciences, up 24.2 percent.

The overall increase in patents issued to Oregon companies came despite noticeable decreases in patents awarded in several of the state's mainstay industries, including semiconductors and electrical devices, which dropped 18.9 percent in 2010 and a total of 32.3 percent since 2008. While patent grants to Oregon sporting goods, footwear and apparel companies were up 21.0 percent in 2010, it wasn't enough to erase a 42.2 percent decline the previous year, leading to an overall drop of 30.1 percent since 2008. Patents on optics technology, including lasers, scanners, motion detection systems and the like, dropped 17.4 percent in 2010, and a total of 20.7 percent from 2008.

Oregon-based organizations involved in clean tech and nano- and microtechnology R&D still represent a fraction of patents issued in the state, but the number is expected to increase in the future as more bring products to market.

Among those organizations are the state's public universities, which even during the doldrums of 2008 and 2009 constituted a bright spot in the state's patent activity thanks in part to an uptick in federally funded research efforts. A push to commercialize university-sponsored research has also resulted in more applications being filed, and according to university officials, should result in more patents being issued in 2011 and beyond.



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Oregon Patents by Invention Category				
Category	2008 Total	2009 Total	2010 Total	Percent Change 2008–2010
Computer Software/Internet/Business Methods	579	587	750	29.5%
General Mechanical/Other	488	433	623	27.7%
Computer Hardware	426	421	465	9.1%
Semiconductor Manufacturing	390	360	352	-9.7%
Sporting Goods/Footwear/Apparel	346	200	242	-30.1%
Life Sciences/Plants	147	157	193	31.3%
Chemicals/Materials Science	99	91	123	24.2%
Optics Technology	150	144	119	-20.7%
Electrical Devices (Semiconductors)	133	111	90	-32.3%
TOTAL	2,706	2,504	2,957	9.3%

Source: Stoel Rives LLP

Top Oregon Patent Awardees

The decline and subsequent rebound in patent activity over the past three years did not alter the standing of the state's top patent awardees.

In 2010, Intel retained its place as the state's top patent recipient, an honor the semiconductor giant has retained for at least the past decade. Intel, which is also the state's largest private employer, was issued 2,015 patents in the past three years, or close to a quarter (24.7 percent) of all patents granted to Oregon inventors during that time, including 700 in 2010, 627 in 2009 and 688 in 2008. Some of those were the work of Intel researcher Robert Chau, who recently received his 200th patent and has dozens more pending, according to the *Oregonian*.²⁹

Intel made headlines in February when the company announced it would spend \$3 billion³⁰ building D1X, a research facility on its Hillsboro campus that is expected to open in 2013. The factory will be one of the largest and most advanced semiconductor fabs in the world,

29 http://www.oregonlive.com/business/index.ssf/2010/04/intel_researcher_leads_oregons.html

30 http://www.oregonlive.com/politics/index.ssf/2011/02/obama_embraces_intels_culture.html



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according to Intel CEO Paul Otellini, who discussed it during President Obama’s February 18, 2011 tour of the company’s Hillsboro facilities, while the President was on a tour of the West Coast to meet with high-tech industry leaders.

Rounding out the top five patent awardees for 2010 were Hewlett-Packard, Nike, Xerox and IBM, all names that have appeared in the top tier of the state’s patent recipients, or close to it, for years.

Top 20 Companies by Patents Awarded in 2010	
Company	Number of Patents
Intel Corp.	700
Hewlett-Packard Co. L.P.	231
Nike, Inc.	174
Xerox Corp.	122
IBM	79
Digimarc Corp.	58
Micron Technology, Inc.	50
Sharp Laboratories of America, Inc.	32
Novellus Systems, Inc.	29
Tektronix, Inc.	25
Electro Scientific Industries, Inc.	22
Synopsys, Inc.	18
SD3, LLC	18
IdaTech, LLC	16
Ford Global Technologies, LLC	15
Mentor Graphics Corp.	14
Unity Semiconductor Corp.	13
Terra Nova Nurseries, Inc.	13
A-dec, Inc.	13
Oracle International Corp.	13

Sources: USPTO, Stoel Rives LLP

Top 20 Companies by Patents Awarded in 2009	
Company	Number of Patents
Intel Corp.	627
Hewlett-Packard Co. L.P.	224
Nike, Inc.	129
Micron Technology, Inc.	97
Xerox Corp.	63
IBM	63
Digimarc Corp.	54
Tektronix, Inc.	32
Cascade Microtech, Inc.	29
Sharp Laboratories of America, Inc.	22
Synopsys, Inc.	19
Electro Scientific Industries, Inc.	18
LSI Logic Corp.	15
Terra Nova Nurseries, Inc.	14
InFocus Corp.	14
Datalogic Scanning, Inc.*	13
University of Oregon	13
Deckers Outdoor Corp.	13
Oregon Health & Science University	12
Latic Semiconductor	12

* Includes Datalogic Scanning Inc., and Datalogic Mobile, Inc.
Sources: USPTO, Stoel Rives LLP



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While some names remained the same, other companies that have been in the upper echelon of the state’s patent awardees in the past fell slightly lower in the standings in 2010, including Micron Technology, Inc., LSI Logic Corp. and Digimarc Corp.

Top 20 Companies by Patents Awarded in 2008	
Company	Number of Patents
Intel Corp.	688
Hewlett-Packard Development Co., L.P.	226
Nike, Inc.	210
Micron Technology, Inc.	103
Xerox Corp.	55
IBM	46
Digimarc Corp.	44
Sharp Laboratories of America, Inc.	40
Tektronix, Inc.	38
LSI Logic Corp.	33
Terra Nova Nurseries, Inc.	31
Cascade Microtech, Inc.	26
InFocus Corp.	25
Synopsys, Inc.	23
Wolverine World Wide, Inc.	21
Novellus Systems, Inc.	17
Lattic Semiconductor Corp.	16
Oregon Health & Science University	15
Electro Scientific Industries, Inc.	14
Leatherman Tool Group, Inc.	12

Sources: USPTO, Stoel Rives LLP

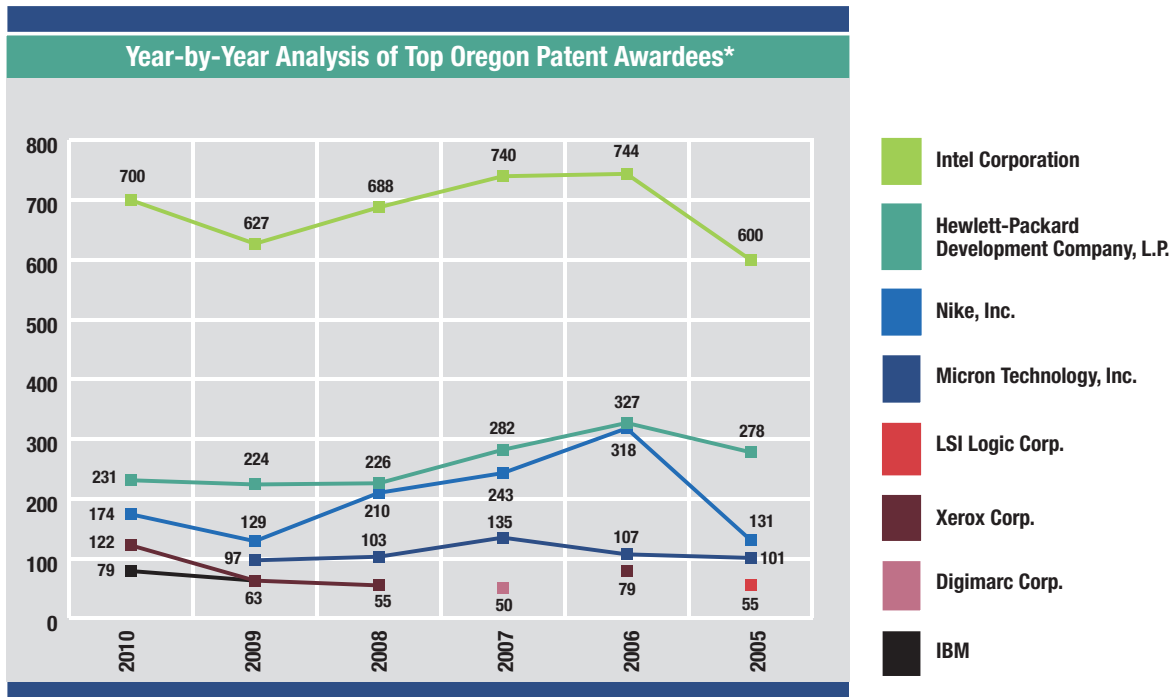


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V. Oregon Industries and Companies

Although patent activity at Intel, Hewlett-Packard, Nike and other major Oregon companies seesawed in recent years, the state's top five patent awardees continued to account for the lion's share of patents issued in the state, although the portion they represent is slowly declining.



Sources: Stoel Rives LLP

In 2010, Oregon's top five patent awardees grabbed 44.2 percent of all patents awarded. That's a slight drop from 48.1 percent in 2009 and 47.4 percent in 2008.

The drop corresponds to a small but steady climb in the total patents issued to small businesses, startups and spinoffs here. In 2010, 9.6 percent of all patents granted in Oregon went to companies that received a single patent, and 23.2 percent went to companies that were issued five or fewer. That's roughly in keeping with trends seen in the previous two years. In 2009, 11.2 percent of all patents granted went to companies gaining a single patent, and in 2008, the figure was 9.6 percent. In 2009, 15.6 percent of all patents issued in the state went to companies receiving five or fewer patents, up slightly from 13.8 percent in 2008.

The higher number of companies issued five or fewer patents corresponds with the uptick in startups that have realized the value of patenting their inventions, says Austin, intellectual



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property director for Electro Scientific Industries. In the past, startups ignored patents because they felt the application process required money they couldn't afford, he says. But today, more realize that if they want to attract investors or eventually sell, "a big part of making [the business] valuable is to approach suitors with all of the patents they have."

Protecting intellectual property through patents and trade secrets is increasingly important for startups and small companies, especially those that create technologically advanced products and processes, says Jeff Woller, a patent attorney in Stoel Rives' Technology and Intellectual Property Group. If companies don't have patent protection, they risk opening the door for competitors to use sophisticated reverse engineering techniques to copy their products – activities that could potentially reduce margins, investor interest and buyout opportunities, Woller says.

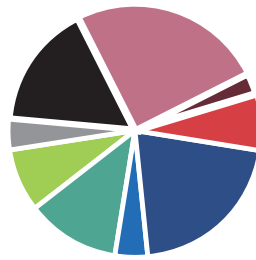
How Oregon's Small Inventors Stack Up				
Year	Total Patents Issued to Oregon Companies/Inventors	Total Patents Issued to Top 5 Awardees	Percent of Total Represented by Top 5 Awardees	Percent of Total Represented by All Other Awardees
2010	2,957	1,306	44.2	55.8
2009	2,504	1,203*	48.1	51.9
2008	2,705	1,282	47.4	52.6
2007	2,831	1,450	51.2	48.8
2006	3,204	1,687	52.6	47.4
2005	2,261	1,113	49.2	50.8

* IBM and Xerox tied for fifth place, so results include six companies
 Source: Stoel Rives LLP

Economic Diversity

During a three-year period that saw the state's patent activity decline before righting itself again in 2010, the mix of patents issued stayed relatively unchanged. As in years past, no single industry accounted for more than a quarter of patents issued – a sign of the region's diversified economic base.

In 2010, more patents were issued for computer science, Internet and business method inventions than any other category (25.4 percent), followed by general mechanical (21.1 percent), computer hardware (15.7 percent) and semiconductor manufacturing (11.9 percent).



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In the past three years, the computer science, Internet and business methods sector has shown a slight increase in the percentage of the total patents issued, rising to 25.4 percent in 2010 from 21.4 percent in 2008.

Patents issued for general mechanical inventions also grew, comprising 21.1 percent of all patents issued in 2010, up from 17.3 percent in 2009 and 18.0 percent in 2008.

Patent activity in other industry sectors has been flat, including patents on innovations in life sciences (such as medical devices) and new plant breeds, which accounted for 6.5 percent of all patent awards in 2010, 6.3 percent in 2009 and 5.4 percent in 2008. Likewise, chemicals and materials science accounted for approximately 4 percent of the state’s patent activity from 2008 to 2010.

Other industries have seen their share of overall patent grants diminish. Semiconductor manufacturing accounted for 11.9 percent of patents issued in the state in 2010, down from 14.5 percent in 2009 and 14.4 percent in 2008. Patents on footwear, apparel and other sporting goods stood at 8.2 percent of the state’s total in 2010, up from 8.0 percent in 2009 but a drop from 10.9 percent in 2008.

Oregon Patents by Invention Category						
Category	2010 Patents	Percent of Total 2010 Oregon Patents	2009 Patents	Percent of Total 2009 Oregon Patents	2008 Patents	Percent of Total 2008 Oregon Patents
Computer Software/Internet/Business Methods	750	25.4	587	23.4	579	21.4
General Mechanical/Other	623	21.1	433	17.3	488	18.0
Computer Hardware	465	15.7	421	16.9	426	15.7
Semiconductor Manufacturing	352	11.9	360	14.4	390	14.4
Sporting Goods/Footwear/Apparel	242	8.2	200	8.0	294	10.9
Life Sciences/Plants	193	6.5	157	6.3	147	5.4
Chemicals/Materials Science	123	4.2	91	3.6	99	3.6
Optics Technology	119	4.0	144	5.7	150	5.5
Electrical Devices	90	3.0	111	4.4	133	4.9
TOTAL	2,957	100	2,504	100	2,706	100

Source: Steel River



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Emerging Industries

Some emerging industries are not yet generating substantial patent activity, but could in the future. They include:

Clean Energy: State's Alternative Power Cluster Expands

Oregon's clean energy industry has become a particularly bright spot in the state's economy, and 2010 was a banner year³¹ for local clean tech businesses, according to a recent column in *Sustainable Industries*, a trade publication for the West Coast's renewable energy industry.

During the year, Vestas, the Danish wind turbine manufacturer, committed to expanding its North American headquarters in Portland; SolarWorld expanded its Hillsboro factory that makes photovoltaic solar panels; and ReVolt Technology LLC, a Swiss company that makes rechargeable automobile batteries, committed to moving its R&D and North American headquarters to Portland.

In addition, the Portland Development Commission's Clean Tech Team is working to solidify the metro area's standing as a clean tech hub. In 2011, the team has committed to promoting three core clusters: (1) wind and solar energy; (2) green building technologies and energy-efficient retrofits; and (3) electric cars and energy storage, according to *Sustainable Business Oregon*.³²

This Oregon clean tech emphasis mirrors clean tech patent activity nationwide. According to the Clean Energy Patent Growth Index,³³ which has tracked activity in the sector for the past decade, the USPTO issued a record 490 U.S. clean tech patents in the third quarter of 2010, the latest available data, an 80.8 percent jump from 271 in the third quarter of the previous year.

To learn more about the Renewable Energy industry visit the Stoel Rives Renewable + Law blog at www.lawofrenewableenergy.com.

University Research: Picking Up the Slack

There's an old adage about industrial research: when it drops off in the private sector, universities pick up the slack. According to Joe Tanous of Oregon State University (OSU), that's what's happening in Oregon today. At a time when the economy has put a dent in many companies' R&D efforts, research at the state's major universities is going gangbusters due to an influx of federal funding, better tech-transfer programs and changes to tenure-track requirements that are encouraging professors to pursue patents as an alternative to academic publishing.

Tanous is in a position to know. The one-time Silicon Valley venture capitalist is now director of commercialization at OSU, where he is responsible for turning \$275 million in government-funded research into startups and finding venture funding to help them grow.

31 <http://sustainableindustries.com/articles/2010/11/maintaining-oregons-leadership-cleantech-economy>

32 <http://www.sustainablebusinessoregon.com/articles/2010/12/pdc-hones-its-cleantech-focus.html>

33 http://cepgi.typepad.com/heslin_rothenberg_farley_/



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Getting patents on university research is integral to the process. Since mid-2009, OSU researchers have filed approximately 80 disclosures that have led to at least 30 patent applications in electrical engineering, computer science, agricultural science, medical devices and micro- and nanotechnology, Tanous says.

In the past five years, OSU has spun off 14 companies based on patented university research. Of those, nine have received an aggregate \$130 million in venture financing. To date, the most successful of those has been Home Dialysis Plus, a Portland maker of portable kidney dialysis machines that raised \$52 million in summer 2010.³⁴

OSU isn't the only school that has benefitted from additional state and federal funding for university research. From 2009 to 2010, OSU and Oregon's three other research universities – Oregon Health & Science University, the University of Oregon and Portland State University (PSU) – collected more than \$850 million in research grants, a 19 percent increase from the previous year, according to the *Oregonian*.³⁵

In the past three years, PSU has received six patents on nanotechnology sensors, grapheme and drug-related innovations. The school has another 42 patent applications in the pipeline, according to Dana Bostrom, manager of PSU's patent portfolio.

PSU's patent activity has increased since the formation seven years ago of the Oregon Nanoscience and Microtechnologies Institute³⁶, a corporate- and government-backed research network. But patent pendency continues to be a problem. In the three years since Bostrom became PSU's director of innovation and industry alliances, only one of the university's patent applications has made it as far as a first office action, she says.

Still, Bostrom isn't discouraged, and points to patent applications that PSU has filed with several joint partners as one sign that university research in the state is on a roll. Two of the school's partners are DesignMedix, a hybrid drug developer, and APDM,³⁷ the maker of a movement monitoring system used in physical therapy and other settings.

"As we grow our research, we create more great stuff we want to be used," Bostrom says. "I don't think any of us are slowing in our patent filing at the university level in Oregon."

Agriculture: Inside Plant Patents

Terra Nova Nurseries, Inc. is one of the fortunate companies that made it through the recession relatively unscathed.

The privately held Canby company switched specialties when the residential real estate market

34 <http://www.homedialysisplus.com/>

35 http://www.oregonlive.com/education/index.ssf/2010/09/oregon_university_researchers.html

36 <http://www.onami.us/>

37 <http://apdm.com/>



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started to go south and is now focused on breeding perennials and annuals suitable for planting in pots. In the nursery stock business, so-called “container gardening” is a fast-growing trend, says Dan Heims, Terra Nova’s co-founder. “It’s one of the few markets that have continued to go upward, whereas shrubs and trees are very depressed,” he says.

The USPTO grants plant patents to companies or inventors for discovering or asexually reproducing distinct and new varieties of plants. Far fewer U.S. plant patents are issued than utility or design patents. In 2008, the USPTO issued 1,240 plant patents, a number that dropped 18.6 percent to 1,009 the following year, according to the agency’s patenting trends bulletins for those years.

In 2008 and 2009, Terra Nova was granted a total of 45 plant patents, or about 2 percent of all U.S. plant patents issued in those years. In all, Terra Nova has received approximately 400 U.S., Canadian and international plant patents since the company was formed in 1992, Heims says.

Terra Nova works with laboratories in Germany, Poland, Russia, New Zealand, India, Indonesia and Chile to develop new plant breeds, a process that can take up to two years before the company files an application. When Heims started out, the plant patent application process took up to two years, but additional USPTO examiners have cut that time in half, he says.

The number of patents Terra Nova receives in a given year depends on the type of plants the company is breeding. Right now the focus is on annuals, which has caused the company’s applications to triple, Heims says.



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Oregon's Top 5 Awardees per Patent Category, 2008-2010

Computer Software/ Internet/Business Methods			
Assignee	2010	2009	2008
Intel Corp.	321	289	293
IBM	66	49	36
Digimarc Corp.	53	52	41
Hewlett-Packard Development Co., L.P.	34	21	24
Sharp Laboratories of America, Inc.	17	14	26

Sources: USPTO, Stoel Rives LLP

General Mechanical/ Other			
Assignee	2010	2009	2008
Xerox Corp.	85	27	28
Hewlett-Packard Development Co., L.P.	52	53	58
Intel Corp.	21	11	23
SD3 LLC	17	8	
Ford Global Technologies, LLC	13	7	
Leatherman Tool Group, Inc.		11	12
Nike, Inc.		8	13
Jeld-Wen, Inc.		7	
Wam Industries, Inc.		7	

Sources: USPTO, Stoel Rives LLP



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Computer Hardware			
Assignee	2010	2009	2008
Intel Corp.	173	159	157
Hewlett-Packard Development Co., L.P.	39	28	34
Tektronix, Inc.	16	19	22
Xerox Corp.	11		
Electro Scientific Industries, Inc.	8		
Cascade Microtech, Inc.		11	
Analog Devices, Inc.			9
IBM		10	
Micron Technology, Inc.			7

Sources: USPTO, Stoel Rives LLP

Semiconductor Manufacturing			
Assignee	2010	2009	2008
Intel Corp.	161	126	153
Hewlett-Packard Development Co., L.P.	36	37	33
Micron Technology, Inc.	35	61	56
Novellus Systems, Inc.	23		
Sharp Laboratories of America, Inc.	11		
Cascade Microtech, Inc.		17	21
LSI Corp.		11	18

Sources: USPTO, Stoel Rives LLP



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Sporting Goods/Footwear/ Apparel

Assignee	2010	2009	2008
Nike, Inc.	156	111	195
Wolverine WorldWide, Inc.		3	21
Deckers Outdoor Corp.	6	13	19
Nautilus, Inc.	5	9	
CA06, LLC		3	8
Leupold & Stevens, Inc.		5	4
Columbia Sportswear North America, Inc.	4		
Sorel Corp.	4		
Adidas International Marketing	3	3	
Wilson Sporting Goods Co.	3		
Extreme Technologies, Inc.	3		

Sources: USPTO, Stoel Rives LLP

Life Sciences/ Plants*

Assignee	2010	2009	2008
Terra Nova Nurseries, Inc.	13	14	
Biotronik CRM Patent AG	10	9	
Life Technologies Corp.	9		
Agrinomics LLC	8	5	
Xerox Corp.	7	8	6
Oregon Health & Science University		8	10
Regents of the University of California			7
Cook, Inc.		5	
Bailey Nurseries, Inc.			4
State of Oregon			4

* Includes pharma, biotech, medical devices
and agriculture patents

Sources: USPTO, Stoel Rives LLP



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Chemicals/ Materials Science			
Assignee	2010	2009	2008
Hewlett-Packard Development Co., LP	42	24	36
IdaTech, LLC	11	5	5
Cabot Corp.		6	3
Xerox Corp.	6	5	7
High Impact Technology LLC	5		
Intel Corp.			5
Nike, Inc.	4	5	

Sources: USPTO, Stoel Rives LLP

Electrical Devices			
Assignee	2010	2009	2008
Intel Corp.	13	29	43
Synopsys, Inc.	12	13	14
Unity Semiconductor Corp.	10		
Micron Technology, Inc.	9	20	27
Hewlett-Packard Development Co., L.P.	5	5	
Mentor Graphics Corp.	5		
Lattice Semiconductor Corp.		8	8
LSI Corp.			6

Sources: USPTO, Stoel Rives LLP

Optics Technology			
Assignee	2010	2009	2008
Hewlett-Packard Development Co., L.P.	19	51	36
Electro Scientific Industries, Inc.	9		
Intel Corp.	6	11	12
Micron Technology, Inc.			8
Aptina Imaging Corp.	6	6	
Xerox Corp.	5	6	
3M Innovative Properties Co.			6
Lightsmyth Technologies, Inc.			6
Deep Photonics Corp.	4		
Avago Technologies General IP	4		
InFocus Corp.		8	15
Datalogic Scanning, Inc.		5	

Sources: USPTO, Stoel Rives LLP



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VI. Looking Forward

It's hard to predict how quickly Oregon will completely recover from the recession. Although the state's unemployment rate at the end of 2010 was stuck at 10.6 percent, job growth during the year rose a tad, to 0.7 percent, the first increase since 2008, according to a March 2011 report³⁸ from the Oregon Office of Economic Analysis.

The improvement in patent activity in the state was a bigger cause for celebration. After two years of declines, patent activity revived itself in 2010, with an 18.1 percent increase, more than making up for the previous two years' losses. Although part of that was due to patent applications filed before the recession, local patent attorneys, corporate counsel and university patent advisors still took it as an early sign that the state's economy and business sector are headed in the right direction.

Things are looking up at the national level too. The USPTO is taking steps to rectify long pendency periods and a patent application backlog that hasn't budged in years. The Obama administration also has pledged its continued support for patent reform as a way to step up American innovation and create U.S.-based jobs, according to a USPTO white paper³⁹ on patent reform.

As a lagging indicator, patent grants can be expected to dip or level out slightly in the next two to three years, says Ferris of Stoel Rives. "But as the USPTO steps up efforts to cut backlog, we may instead see continued increases in grants and a decline in backlog, which could then spur modest recovery in new application filings."

Back in Oregon, the state received a needed economic boost with Intel's announced plans to build the \$3 billion D1X research facility that company representatives and local government leaders say will lead to the creation of new R&D and factory jobs, and conceivably, stepped-up patent activity. The state's public universities are developing and patenting inventions at an unprecedented rate. Startups and small businesses in clean tech, life sciences and new fields such as solar energy are gradually accounting for more of the state's patents, another promising sign. "As that activity continues to grow, we expect Oregon will continue to be a per capita leader both in patent activity and in economic growth resulting from that activity," says Van Valkenburg of Stoel Rives.

Economists, intellectual property law experts and executives in Oregon's business community are hopeful that, taken together, these activities will sustain and strengthen the state's patent activity into the future.

38 <http://www.oregon.gov/DAS/OEA/docs/economic/press0311.pdf>

39 http://2001-2009.commerce.gov/s/groups/public/@docl/@os/@opa/documents/content/prod01_009147.pdf

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