

Patent Reform is Here: How Can You Use It to Your Company's Advantage

Clifton E. McCann, Charles J. Morton,
and Lars H. Genieser, Ph.D.
Venable LLP, Washington, D.C.

Jennifer Vanderhart, Ph.D.
Exponent, Inc., Alexandria, VA

"The patent system ... added the fuel
of interest to the fire of genius."

— *Abraham Lincoln*

At last, patent reform!

America Invents Act is now law

- First proposed in 2005, 6 years in the making
- Eventually passed by Senate on 89-9 vote on September 8, 2011
- Signed into law September 16, 2011
- Some provisions took effect immediately

Why now?

- The U.S. economy has lost jobs
- ***Patents and jobs are linked:***
 - Patents protect ideas
 - Protected ideas invite investment
 - Investment can create businesses
 - Businesses can create jobs
- Pressure on Congress helped spur passage

Why is it important?

- Whether the law will create so many jobs has been debated
- Regardless, the law alters bedrock fundamentals
- ***Not since 1952 has U.S. patent law been so dramatically changed***
- Essential to know the changes and how to benefit from them

Who gets what?

- Some provisions benefit ***patent owners***
- Some provisions benefit ***patent challengers***
- Some are neutral, but markedly alter the playing field
- Perception that big business will find it easier to acclimate
- ***Increased integrity*** of U.S. patents is a goal, and this will benefit ***owners, challengers, and industry alike***

For the patent owner (and patent investor) ...

- A government commitment to better fund the Patent Office
- New procedures for expediting the examination and issuance of patents
- The evisceration of the best mode requirement
- A way to correct an inadvertent or negligent failure to satisfy the duty to disclose

For the patent challenger ...

- A more effective way to tell the PTO about prior art that should prevent a competitor's pending application from issuing
- New ways to challenge the validity of a patent within the PTO, where proceedings are likely to be quicker and less costly than in court
- More chances to avoid infringement liability as a result of the challenger's prior practice of the claimed invention
- Greater ability to prevent runaway damages awards (provided by courts, not new law)

Neutral provisions that alter the playing field ...

- “First inventor to file“: A drastically different way to decide which of two contemporaneous inventors should get the patent award
- “Prior art” redefined: Drastically different definition of “prior art,” that is, the documents and events that can invalidate a patent.

Obtaining Patents Under Patent Reform

- New patent reform law provisions affect decisions on:
 - What to patent.
 - When to apply for a patent.
 - How to apply for a patent.

New 35 USC 102(a): “entitled to a patent unless ... available to the public before ***the effective filing date of the claimed invention ...***”

- First inventor to file:
 - A radical change from prior U.S. law: “first to invent”.
 - Renders U.S. law more consistent with rest of world.

New 35 USC 102(a): “entitled to a patent *unless* ... the claimed invention was *patented, described in a printed publication, or in public use, on sale* ... before the effective filing date of the claimed invention ...”

- Disqualifying public use, sale, or offer for sale can now occur anywhere in world (consistent with EP and JP law).
- Continued 1-year grace period for disclosure by or obtained from the inventor.
- But, for example, a non-disclosed sale or offer for sale by the inventor may now be a patent defeating act.

Strategic opportunity: First inventor to *publish*

- By “disclosing” (e.g., publishing), inventor forecloses opportunity for *another* to receive a patent.
- By publishing, *inventor* ensures his right to apply for patent within the 1-year even if another later “discloses” during this time.
- Can be viewed as an effective extension of the patent term beyond 20 years from filing.

Effectively no more requirement to disclose “best mode” in patent application

- New 35 USC 112 continues to state that “specification ... shall set forth the best mode contemplated by the inventor.”
- However, “best mode” requirement is eviscerated by new 35 USC 282(3)(A): “failure to disclose the best mode shall not be a basis on which any claim of a patent may be canceled or held invalid or otherwise unenforceable.”

Strategic opportunity from elimination of “best mode” requirement?

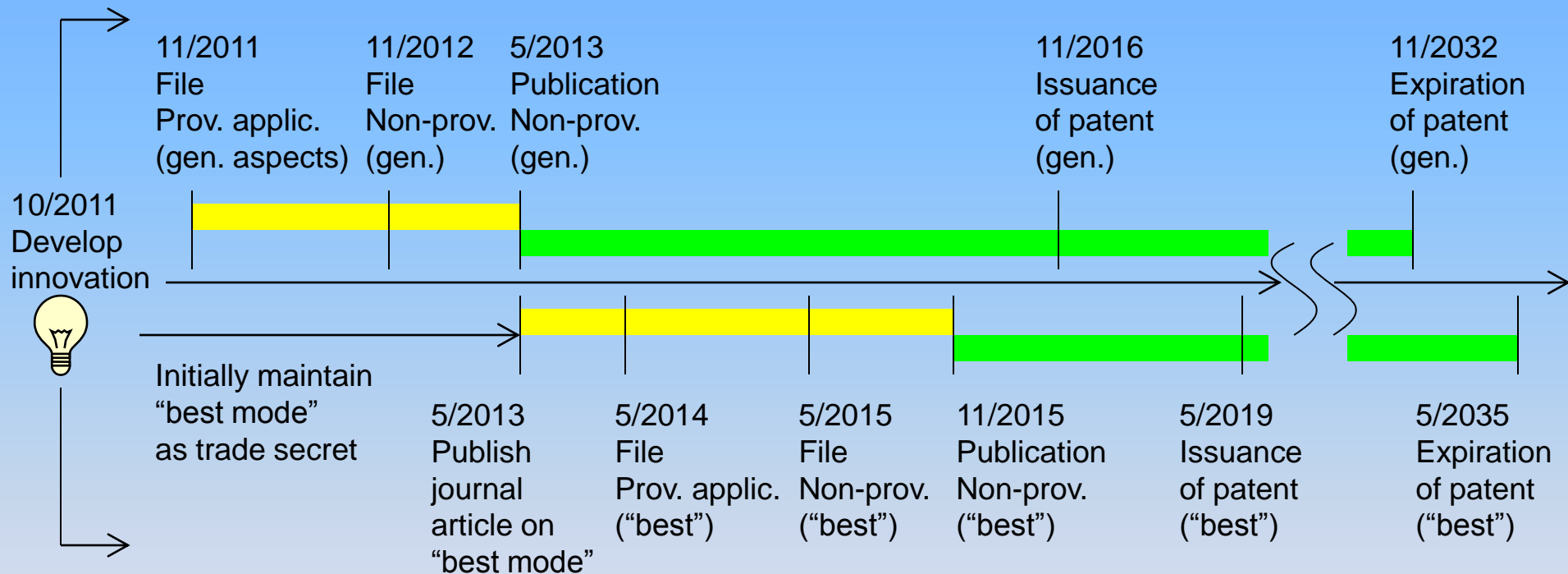
- Disclose and claim general aspects of an invention in an application.
- But maintain a specific aspect of an invention as a trade secret.

Applying for patent on general aspects of invention, while maintaining “best mode” aspect as trade secret: Risks

- Other than inventor may independently develop and patent specific “best mode” aspect. Applicant can no longer argue first to invent.
- Commercial application of trade secret may still preclude seeking a patent:
 - E.g., using a process secretly to make a product, ***but then*** selling the product may still preclude seeking a patent on the process.
- Despite understood congressional intention, courts impute meaning to vestigial “best mode” text.

Approaches (with risk) to extending exclusive rights to technology

General aspect of innovation



Specific "best mode" aspect of innovation

- = Prevent another from patenting (secure freedom-to-operate)
- = Enforceable patent rights

What and When to Patent?

	“Old” Law	“New” Law
What?	All aspects of invention, especially “best mode”.	Depends: May opt to keep “best mode” as a trade secret.
When?	Depends: May opt to delay filing after conception while diligently “reducing to practice” (although must avoid “abandon, suppress, or conceal”; expensive interference proceeding may be necessary).	As soon as possible to secure priority date (although may opt to make a later filing on “best mode” aspects).

How to Patent?

	Why?	How?
“Fast” routes	<ul style="list-style-type: none">• Enforce rights soon.• Able to expend money up front.	<ul style="list-style-type: none">• Optionally file PCT int’l applic. (then enter US nat’l phase before 30 mos. from filing).• File in US for “Green Tech.” examination (no extra fee, limited number claims, expires 12/31/11 (may be extended)): 1st Office Action typically 3-6 mos.• File in US for prioritized examination (\$4800 fee, non-prov. applic. or bypass continuation, limited number claims): final disposition in 12 mos.
“Slow” routes	<ul style="list-style-type: none">• Secure priority date; do not intend to enforce rights soon.• Defer costs (total expenditures over time may be increased).	<ul style="list-style-type: none">• File provisional applic. (then wait full 12 mos. before filing PCT int’l applic.).• File PCT int’l applic. (then wait full 30 mos. from prov. filing before entering US nat’l phase).• Extensions available.

Major purpose of the new law:

Give PTO new powers to invalidate patents

- PTO to be alternative to courts for validity challenge
- New: Patent Trial and Appeal Board (PTAB)
- Act provides ***three new ways*** to review patents:
 - ***Post-grant review (PGR)***
 - ***Inter partes review (IPR)***
 - Supplemental examination (SE)
- Act changes a previously existing way:
 - Ex parte examination (EPE)
- PGR and IPR will be most significant

PGR and IPR features ...

- **Lower burden of proof** for challenger to invalidate: “**preponderance of the evidence**” instead of the “clear and convincing evidence” standard in federal district court
- **Quick resolution!** Final determination deadline: One year
 - Exception for good cause: Only 6 additional months
- Challenger **cannot later challenge** the validity in a US District Court on any ground raised or “that reasonably could have been raised” in the PGR or IPR proceeding
- PTAB can order discovery, impose sanctions, hold hearings
- PTAB may refuse to review if “substantially” the same prior art or arguments previously were presented to the PTO
- PTAB will refuse to review if challenger already filed a declaratory judgment action for patent invalidity (but invalidity counterclaim okay)

PGR and IPR differences ...

	Post-Grant Review	Inter Partes Review
Timing	<i>Within 9 mos.</i> of patent's issue date	Anytime <i>more than 9 mos.</i> after the patent's issue date, and if patentee served infringement complaint, within one year after complaint was served
Grounds	<i>Unrestricted.</i> Can attack due to ineligible subject matter, lack of novelty, obviousness, failure to enable, etc.	Can only attack on grounds of <i>lack of novelty and obviousness</i>
Evidence	<i>Unrestricted</i>	Limited to <i>patents and printed publications</i>
Test to initiate	Must show that new information <i>"more likely than not"</i> shows unpatentability	Must show a <i>"reasonable likelihood"</i> that challenger will prevail on at least one claim

Supplemental examination ...

- Has a more specialized purpose than PGR & IPR:
 - Patentee has duty to disclose all relevant prior art
 - Failure to disclose can make patent unenforceable
- Sometimes patentee fails to disclose through inadvertence or negligence
- SE allows the patentee to correct such omission
- Patentee submits the omitted prior art and asks PTO to consider it

Ex parte reexamination ...

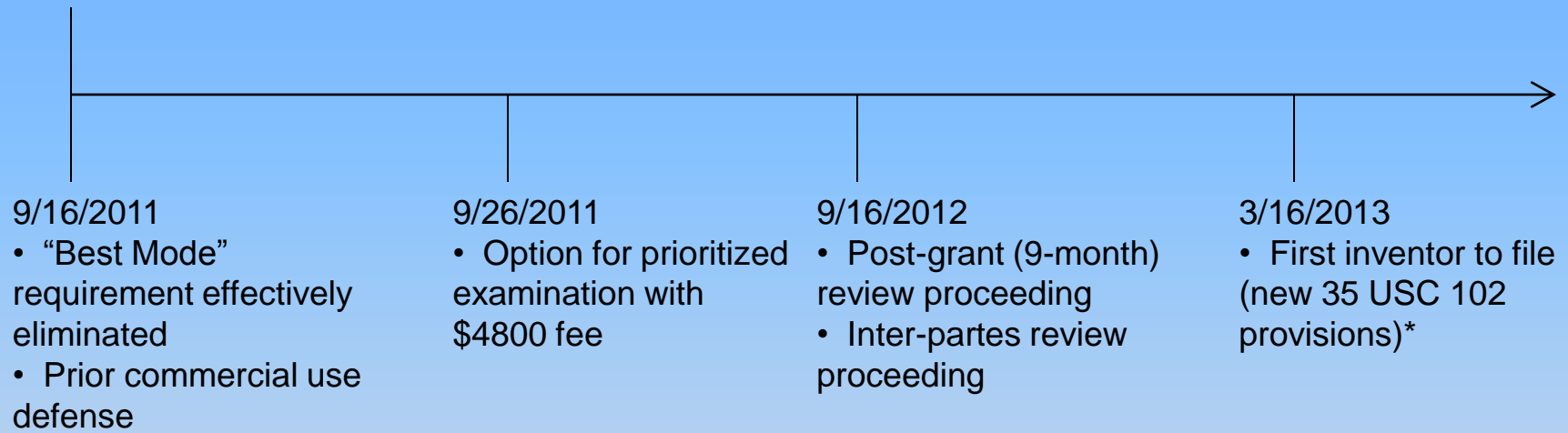
- This limited form of PTO review has been available since the early 1980s
- Ex parte reexamination remains largely intact under the new law
- Minor changes include elimination of district court review ... any appeal of the PTO's final decision in a reexamination proceeding must now be taken directly to the U.S. Court of Appeals for the Federal Circuit

Prior commercial use defense to infringement

- If charged with infringement of a process, accused infringer ***can defend on grounds that he/she commercially used the accused process more than one year before*** the date the patentee filed a patent application or disclosed invention to the public
- Also applies when accused subject matter is a machine, manufacture, or composition of matter used in the accused process
- The ***defense is “personal,”*** meaning it cannot be licensed or transferred to someone else unless entire business is transferred
- Accused infringer cannot expand the prior use to new plant sites
- Does not apply if the patented subject matter is owned by a university or related technology transfer organization

Complex Transition Regime

America Invents Act
(Patent Reform)
signed into law



* Old “first to invent” law continues to apply for patent applications claiming the priority benefit of applications filed before 3/16/2013.

“Reform” in IP Damages Analysis

Underlying Economic Theory

- Royalty will be based primarily on:
 - 1. The expected net incremental benefit provided by the patent
 - 2. The bargaining position of the parties
- “Hypothetical Negotiation” – at the time of infringement, on what “reasonable” amount would the parties have agreed?
 - *Georgia-Pacific* Factors

Difficulties in Recreating a Hypothetical Negotiation

- It is hypothetical for a reason
- Full information is unlikely
- Expected net incremental benefit can consist of many factors, each which may be subject to debate
 - Actual benefit may be hard to parse out
 - Convoyed sales
 - Synergies
 - Non-infringing alternatives

One Historical Solution: The 25 Percent Rule

- Goldscheider Empirical Observations
 - One company (a Swiss subsidiary of an American company)
 - 18 licensees, each with exclusive territories
 - 3 year, renewable terms
 - “In those licenses, the intellectual property rights transferred included: a portfolio of valuable patents; a continual flow of know-how; trademarks developed by the licensor; and copyrighted marketing and product description materials.”

Splitting the Profits

- Somewhat consistent with economic theory
 - Assume (operating) profits should be split
- An assumption economists might resist
 - “The a priori assumption is that the licensee should retain a majority (i.e., 75 per cent) of the profits because it has undertaken substantial development, operational and commercialization risks, contributed other technology/IP and/or brought to bear its own development, operational and commercialization contributions.” (Goldscheider, et. al., *les Nouvelles*, December 2002)

25 Percent Rule Dies

- In *Uniloc*, Federal Circuit says “no more”
 - “fundamentally flawed tool for determining a baseline royalty rate in a hypothetical negotiation.”
 - “legally inadequate methodology.”
- Why?
 - “[I]nadmissible under *Daubert* and the Federal Rules of Evidence, because it fails to tie a reasonable royalty base to the facts of the case at issue.”
 - Does not reflect the parties and industries involved, nor the importance of the patents to the infringed products
 - *Daubert* interpreted Federal Rule of Evidence 702 as requiring that expert testimony be based on a firm scientific or technical grounding.
 - Fails even as a “starting point”:
 - “[B]eginning from a fundamentally flawed premise and adjusting it based on legitimate considerations specific to the facts of the case nevertheless results in a fundamentally flawed conclusion.”

25 Percent Rule – When it makes sense

- When it is actually used in negotiations in the industry
 - Would have been used in hypothetical negotiations
 - i4i supports this: “Thus, considering the foundation laid by Mr. Wagner's testimony, his application of the 25% rule was relevant and appropriately considered.”
- Goes back to the hypothetical negotiation – if they would have agreed to use the 25 percent rule then, and you can show that, then the expert can use it now.
- That’s only half the story ...

Royalty Base Apportionment v. Entire Market Value

- General sense that damages awards in patent infringement litigation have gotten too large
- One line of thought seems to be that if the royalty base is reduced, the damages amount will also be reduced

Apportionment

- Economic theory has not changed
 - Still based on the net incremental benefit provided by the patent and split based on the relative bargaining positions of the parties
- There may not be established markets for the apportioned element
- Rate and base still must be determined together (yes, they are still married)
 - To the extent there are comparable licenses, or licenses provided by the parties, it may be harder to get helpful information from them

The Courts are Divided

- IP Innovation, et. al., v. Red Hat, et. al., 2010
 - The Court ruled the plaintiff “has the burden of proving damages by a preponderance of evidence” and, therefore, “must show some plausible economic connection between the invented feature and the accused operating systems before using the market value of the entire product as the royalty base.”
- Cornell v. Hewlett-Packard, 2009
 - “An over-inclusive royalty base including revenues from the sale of non-infringing components is not permissible simply because the royalty rate is adjustable.”

cont.

- Lucent v. Gateway, 2010
 - Simply put, the base used in a running royalty calculation can always be the value of the entire commercial embodiment, as long as the magnitude of the rate is within an acceptable range (as determined by the evidence). Indeed, all running royalties have at least two variables: the royalty base and the royalty rate. Microsoft surely would have little reason to complain about the supposed application of the entire market value rule had the jury applied a royalty rate of 0.1% (instead of 8%) to the market price of the infringing programs. Such a rate would have likely yielded a damages award of less than Microsoft's proposed \$6.5 million. Thus, even when the patented invention is a small component of a much larger commercial product, awarding a reasonable royalty based on either sale price or number of units sold can be economically justified.

Conclusion

The royalty must represent the economic reality faced by the parties. It must be rational , reasonable, and consistent with the specific facts of the case.

Raising Capital --- 4 Key Questions

1. How much capital do I need?
2. How much equity is available to invest in the business?
3. What is the most cost effective way to raise the necessary resources?
4. How do I convince a third-party to invest?

Types of Capital

- Senior Debt
- Mezzanine Debt/Preferred Equity
- Equity
 - Venture Capital

Senior Debt

- Senior to other payment obligations (Less Risk)
- Commercial Loans
 - Working Capital
 - Term loans
- Asset Based Lending
 - Using collateral as source of leverage
 - Potentially IP backed
- Cash Flow Lending

Least Expensive

Mezzanine Debt/Preferred Equity

- Junior in repayment obligation to senior debt (More Risk)
- Typically used for growth capital
 - Early Investors
 - Recapitalizing the company
 - Acquisitions
 - Expansion
- Generally requires current income to provide a source of current repayment. Rewards speed of protection and cost containment.

Equity

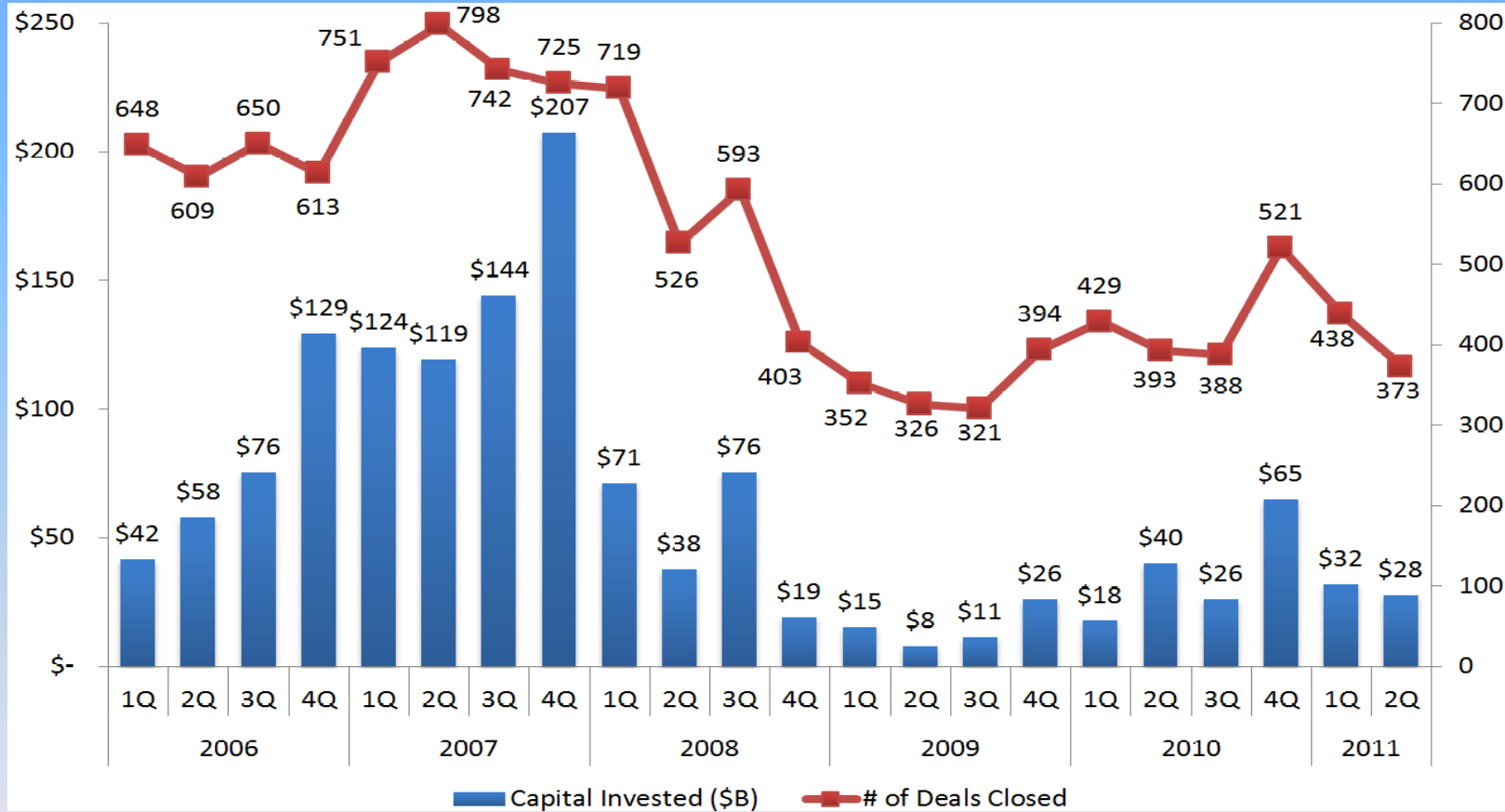
- Providers
 - Institutional
 - Private equity groups
 - Friends and family
- Need to balance with debt
- Most risk
- Requiring as much as 50% equity in today's market

Fundraising by Venture Funds

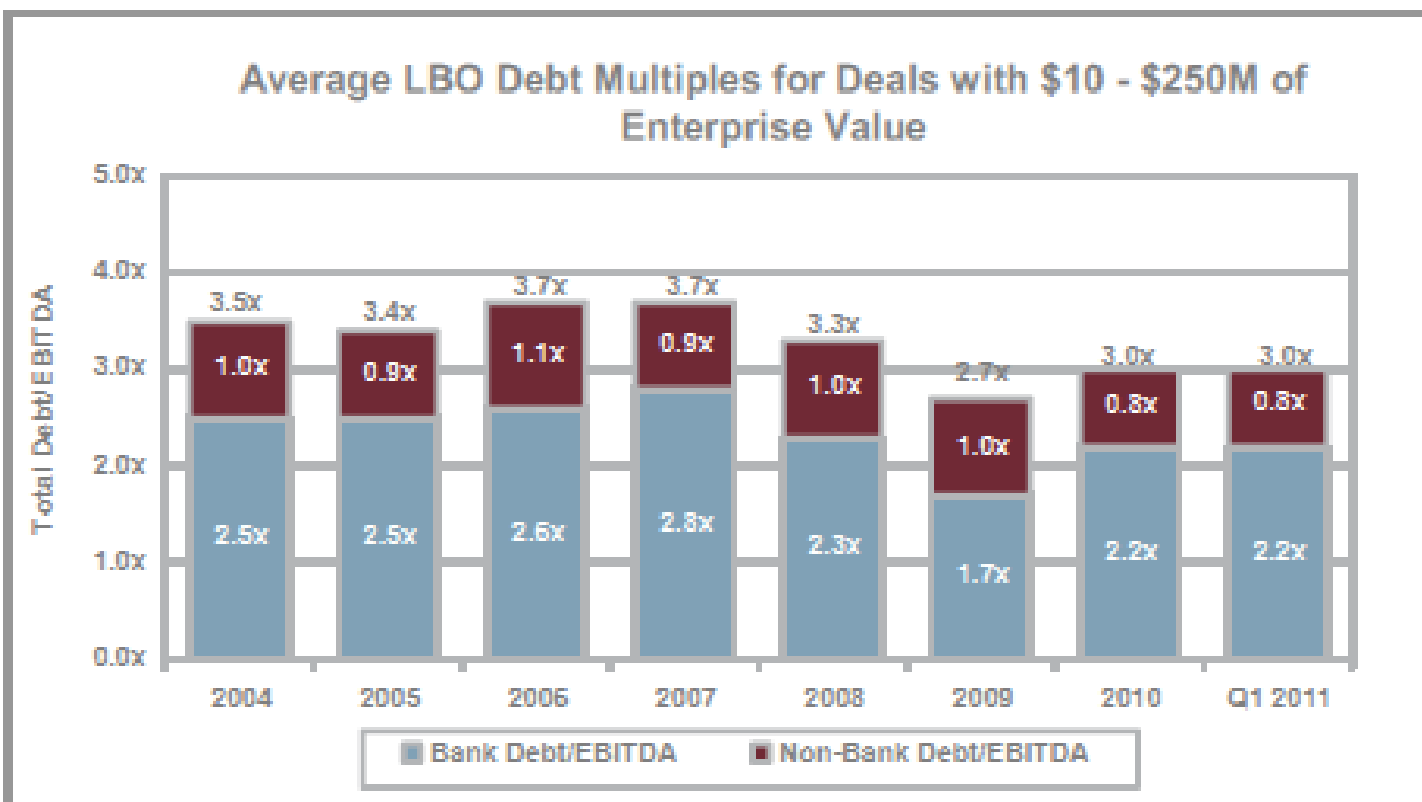
Year/Quarter	Number of Funds	Venture Capital (\$M)
• 2007	233	30,739.7
• 2008	212	25,814.7
• 2009	153	16,191.9
• 2010	162	13,346.3
• 2011	76	10,242.2
• 1Q'09	58	4,945.9
• 2Q'09	39	4,844.2
• 3Q'09	34	2,332.0
• 4Q'09	47	4,069.8
• 1Q'10	45	4,033.8
• 2Q'10	48	2,098.4
• 3Q'10	53	3,593.8
• 4Q'10	45	3,620.3
• 1Q'11	42	7,551.4
• 2Q'11	37	2,690.7

Source NVCA/Thomson Reuters

Total Private Equity Deal Flow

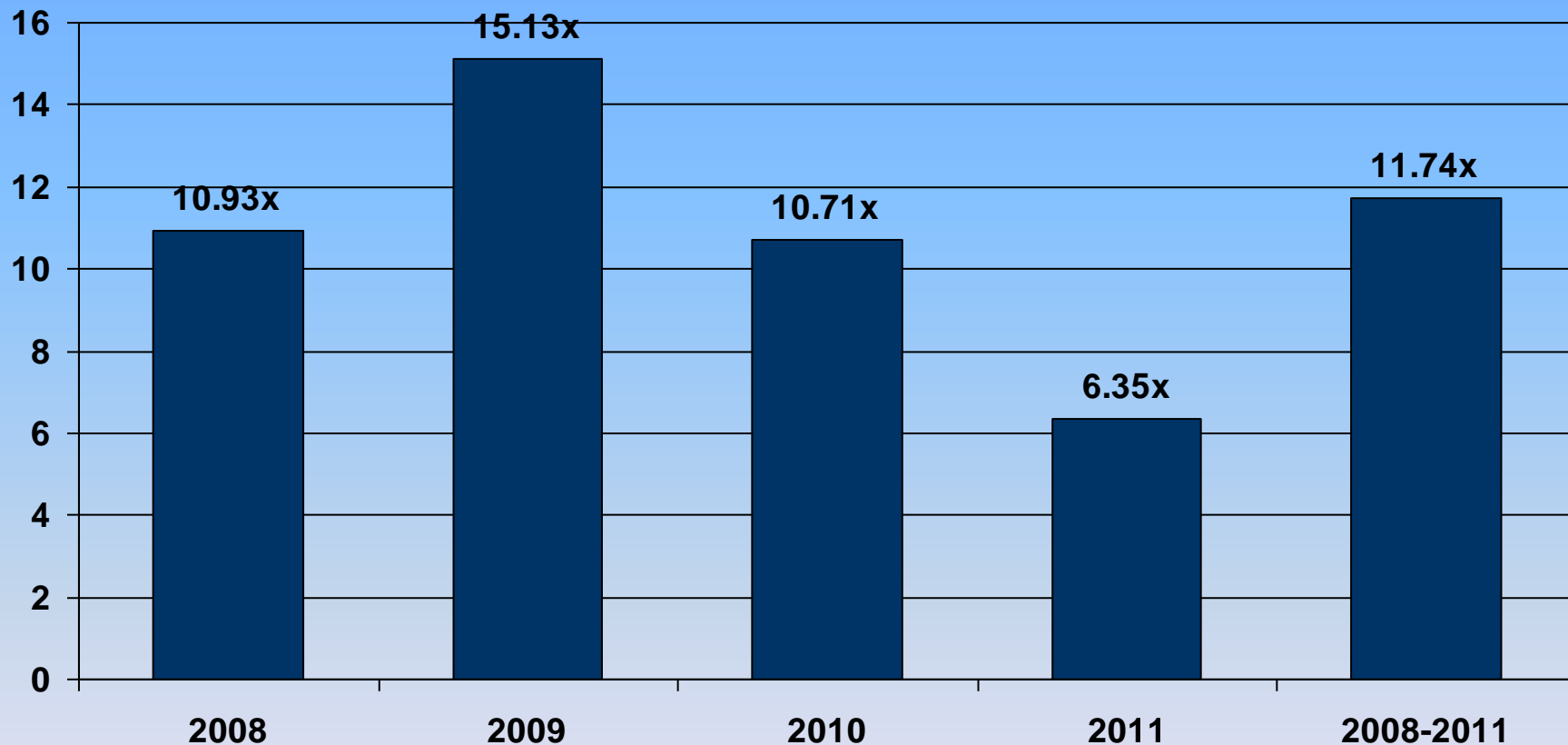


Debt Multiples Have Stabilized



Source: GF Data Resources

Enterprise Value/Adjusted EBITDA Multiples For Water Deals



What Investors Need/Demand

- Clear picture of competitive landscape
- Defensible market position to assure cash flow
 - Barriers to entry for competition
 - Breadth and depth of protection
- Knowledge that you are NOT infringing

What is Happening in the Market

- Growing global awareness
- Access to equity through PEGs/less access to venture
- Uncertainty
- Corporate buyers are sitting on lots of cash/ Hesitant to spend
- Returning access to leverage
- Beginning inter-generational transfer for boomers
- Opportunistic exits

Clifton E. McCann

(cemccann@venable.com; 202.344.8162)

- Mr. McCann is a 30-year veteran and AV-rated patent attorney at Venable LLP in Washington, DC. He has broad and extensive experience helping clients plan intellectual property strategies, obtain patents, and license and defend patent rights. A list of recent accomplishments appears at www.venable.com/clifton-e-mccann.
- Water technology has been a primary focus of Mr. McCann's career. In water tech he has obtained and licensed U.S. and foreign patents and has an undefeated record as first-chair trial counsel in three federal district courts and the U.S. Court of Appeals for the Federal Circuit, with awards and settlements reaching eight figures.
- Mr. McCann has chaired the Patent Section of the Bar Association of the District of Columbia and the American Bar Association's Committee on Intellectual Property Litigation. He is a member of the American Intellectual Property Law Association, the Intellectual Property Owners Group and the Licensing Executives Society, and he is a Trustee of the Bar Association of the District of Columbia Foundation.
- Mr. McCann received an LL.M. in patent law from George Washington University, a J.D. from Catholic University of America, and a bachelor's from Northern Illinois University, where he studied chemistry and biology. He frequently speaks and writes on patents.

Chuck Morton

(cjmorton@venable.com; 410.244.7716)

Chuck Morton, a seasoned M&A and finance lawyer, co-chairs Venable's Corporate Practice Group. He has a national practice representing lenders, investors, and entrepreneurs as they create, build, support and buy or sell businesses. He routinely advises on mergers and acquisitions, financings, including subordinated loan transactions, second lien loans, and equity investments. He regularly acts on behalf of private equity groups.

In addition to recognition in *Chambers USA*, he is found in six categories of the *Best Lawyers in America* (Woodward/White)(Corporate Law, Leverage Buyouts and Private Equity Law, Mergers and Acquisitions Law, Structured Finance Law, Technology Law and Venture Capital Law). He has been tapped repeatedly as one of the five top M&A lawyers in Maryland by *Maryland Super Lawyers*, and has been Martindale-Hubbell AV Peer Rated (the highest possible rating) since 2000. He is a Life Fellow of the American Bar Foundation. Clients describe him as “unwavering in his commitment to us” (*Chambers USA 2010*). He divides his time between the firm's Washington and Baltimore offices.

Outside of Venable, Chuck is the incoming chair of the global board of directors of the Association for Corporate Growth. ACG's 14,000 members are the investors, lenders, advisors and leaders of more than 20,000 middle-market companies. Founded in 1954, the Association for Corporate Growth is a global organization with 56 chapters. Chuck also has a faculty appointment at The Johns Hopkins University, where he teaches various business classes, serves as the vice chair of the Technology Development Corporation of Maryland (TEDCO) and is the General Counsel for the Maryland Chamber of Commerce.

Chuck lives in Baltimore with his wife of more than 20 years, Paddy, and their four children. He is active in his local parish, the Cathedral of Mary Our Queen, where he serves as chair of the Pastoral Council, and is a past member of the School Board.

Lars H. Genieser, Ph.D.

(lhgenieser@venable.com; 202.344.8234)

- As a registered patent attorney in Venable's Technology Division, Lars Genieser advises clients in managing complex international intellectual property portfolios, licensing intellectual property, and prosecuting patents before the USPTO.
- Dr. Genieser counsels clients in the chemical process, environmental remediation, and pharmaceutical sectors, and has prosecuted patents pertaining to, for example, high purity water electrodeionization treatment, protective polymer coatings, plasma processing, small molecule drug therapies, and quantum-dot-based medical and biological analysis.
- Dr. Genieser received a J.D. from Georgetown University, a Ph.D. in Chemical Engineering from the Massachusetts Institute of Technology, and a B.S.E. from Princeton University.
- He is a member of the American Intellectual Property Law Association, the ABA, the American Chemical Society, and the Sigma Xi Scientific Research Society. He writes articles on developments in patent law.

Jennifer Vanderhart, Ph.D.

(jvanderhart@exponent.com; 517.227.7226)

- Dr. Vanderhart is a Principal Economist at Exponent, Inc. in the Epidemiology and Computational Biology group. She has a Ph.D. in Economics and specializes in applied econometrics and microeconomic analysis, including theoretical and empirical analysis in the areas of intellectual property, antitrust, breach of contract, and commercial damages. Prior to joining Exponent, Dr. Vanderhart was a Managing Director at Invotex Group. She has also held positions at LECG and Navigant Consulting, Inc., and taught at Texas A&M University.
- Dr. Vanderhart's experience includes valuations of intellectual property for arms-length licensing and litigation matters, calculating and testifying as to reasonable royalty and lost profit damages in intellectual property infringement cases, and economic analysis of price erosion and other market issues. She has also provided testimony as to appropriate data cost-sharing compensation under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). In addition, Dr. Vanderhart has been involved in assessing damages in numerous commercial damages matters and in matters concerning antitrust counterclaims in intellectual property infringement cases. Dr. Vanderhart has submitted analysis, testimony, and affidavits in state and federal courts as well as for federal arbitration.