Intellectual Property (IP) Protection in the Digital Age:

What every firm and university should know to maximize IP and minimize costs

by

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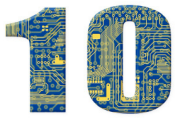


Outline

- **Distinguishing features of US Patent system:**
  - A first to invent and not a first to file system
  - Applicant is the inventor and not the company or university
  - Overview of US Patent Office climate
- **Common pitfalls for start ups and universities:**
  - Missing the boat on IP protection
  - Letting your patent sink with the inventorship
  - Creating the joint venture nightmare scenario

Outline (cont.)

- **Maximizing IP:**
  - Do your due diligence
  - Split up system and subsystems into separate applications
  - Picket fence approach to IP protection
- **Minimizing IP Costs:**
  - Prepare patent-like disclosures to minimize attorney time
  - Work with an experienced attorney
  - Interview patent cases with examiner early and often

Outline (cont.)

- **A Few Important US patent cases and their technological implications:**
  - KSR v. Teleflex
  - In re Bilski
  - Practical considerations

Distinguishing features of US Patent system

- **A first to invent and not a first to file system:**
  - The winner of the race to the patent office may still lose
  - Most countries use the first to file system, but the United States operates under a first to invent system:
    - An invention is generally defined to include: (1) conception of the invention, and (2) reduction to practice of the invention
    - When an inventor conceives of an invention and diligently reduces the invention to practice (by filing a patent application, by practicing the invention, etc.), the inventor's date of invention will be the date of conception
    - This has created in the US a patent interference litigation practice

Distinguishing features of US Patent system (cont.)

- **A first to invent and not a first to file system (cont.):**
  - Lab notebooks may be crucial to determine conception and reduction to practice:
    - Bound lab notebook with dated entries in ink
    - Signatures and dates of two corroborating witnesses who are not inventors ("Read and Understood by:")
  - One year grace period to get a patent application on file:
    - Still better to file provisional application, before making any disclosures to third parties
    - Use confidentiality agreements as added protection

Distinguishing features of US Patent system (cont.)

- **Applicant is the inventor and not the company or university:**
  - In most countries, patent applications are filed on behalf of a company or university applicant
  - In the, US the applicant(s) is/are the inventor(s):
    - Assignment by inventor(s) to company or university of patent rights is crucial
    - Use employment agreements as added protection

Distinguishing features of US Patent system (cont.)

- **Overview of US Patent Office climate:**
  - USPTO was under sever backlog and tried to impose proposed rules limiting the number of filings an applicant can make on an invention:
    - USPTO was sued and rules were enjoined
    - Prior to proposed rules, allowance were down and appeals were up
    - Now with recent economic downturn, allowances are back up, as USPTO now needs to collect more fees
    - Examiner interviews continue to be a most effective way to advance prosecution

Common pitfalls for start ups and universities

- **Missing the boat on IP protection:**
  - Certain types of public disclosures trigger a one year clock to get a patent application on file at the USPTO:
    - Trade shows
    - Public demonstrations
    - Publication of white papers
  - US has a one year grace period:
    - Most other countries require that a patent application is on file prior to such a public disclosure

Common pitfalls for start ups and universities (cont.)

- **Missing the boat on IP protection (Cont.):**
  - Many companies and universities miss the boat on IP protection in their rush to capitalize on their innovations:
    - They fail to consider global IP protection
    - To make matters more complicated, IP protection can come in various forms:
      - Trade secrets
      - Copyrights
      - Trademarks
      - Patents
      - Licensing

Common pitfalls for start ups and universities (cont.)

- **Missing the boat on IP protection (Cont.):**
  - Companies and universities must not step on the IP rights of their competitors:
    - Knowing their competitors' IP rights may be as important as protecting their own
  - Global protection of IP rights is not cheap:
    - Companies and universities should evaluate the importance of their IP, and make IP management, assessment, and protection a central part of their business plan and a necessary cost of doing business

Common pitfalls for start ups and universities (cont.)

- **Letting your patent sink with the inventorship:**
  - Determining and claiming proper inventorship in a patent application is an important consideration that must not be overlooked:
    - Oftentimes, persons such as the CEO of a company or a project manager or thesis advisor are named as inventors in a patent application, even though they did not actually contribute to the invention:
      - Improperly naming an inventor can lead to problems down the line, including patent invalidity

Common pitfalls for start ups and universities (cont.)

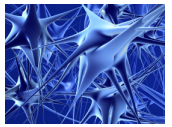
- **Letting your patent sink with the inventorship (cont.):**
  - So, is there a test to determine proper inventorship?
  - A simple example: Assume that an inventor is an avid golfer and invents a golf club with a new and novel golf club head design:
    - The inventor takes the specification for making his golf club to a machinist, who based on the specification makes a prototype golf club for the inventor
    - The machinist is not a co-inventor
    - Similarly, a software programmer who merely generates software based on an inventor's specification is not a co-inventor

Common pitfalls for start ups and universities (cont.)

- **Letting your patent sink with the inventorship (cont.):**
  - Now the machinist in the first example is also an avid golfer and suggests adding additional new and novel features to the golf club head that provide for improved ball flight:
    - In such a situation, the machinist's contribution is not insignificant when measured against the invention as a whole
    - Furthermore, the inventor includes and claims the new and novel features in his patent application
    - Now the machinist is a co-inventor and the software programmer similarly can become a co-inventor

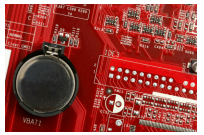
Common pitfalls for start ups and universities (cont.)

- **Creating the joint venture nightmare scenario:**
  - Start ups and universities often must team up with third parties in a joint venture project:
    - A clear joint venture agreement must be in place
    - Too often, relationships go sour and with them goes the IP
    - Important to define who gets what:
      - In "work for hire" situation, contractor may want to retain generic code and modules
      - Employer should retain all project specific IP code and modules
      - This is a common a problem in video game development between a video game publisher and development company



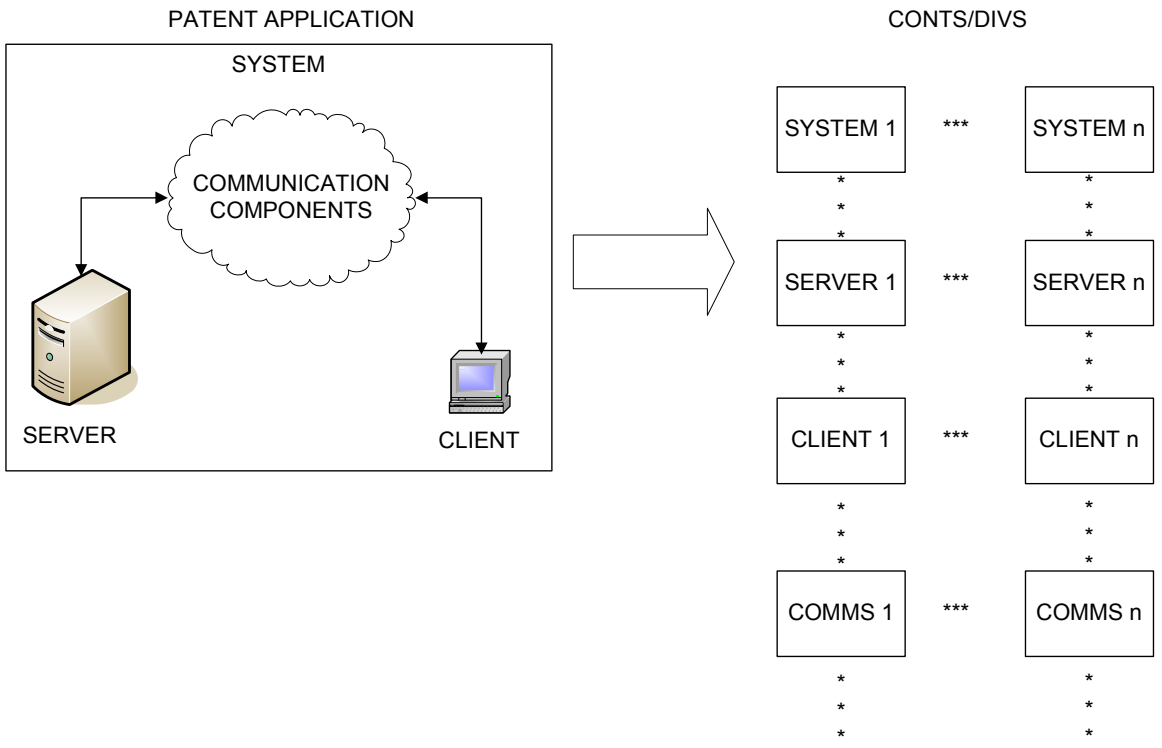
Maximizing IP

- **Do your due diligence:**
  - Consider a patent's return on investment (ROI)
  - Develop an invention disclosure procedure and use it
    - Consider profit sharing with inventors
  - Provisional filings prior to any third party disclosures:
    - When solving customer's problems
    - Prior to publishing white papers and giving conferences
  - Consider world wide IP protection for important technologies
  - Develop a licensing model to generate revenue from patent portfolio



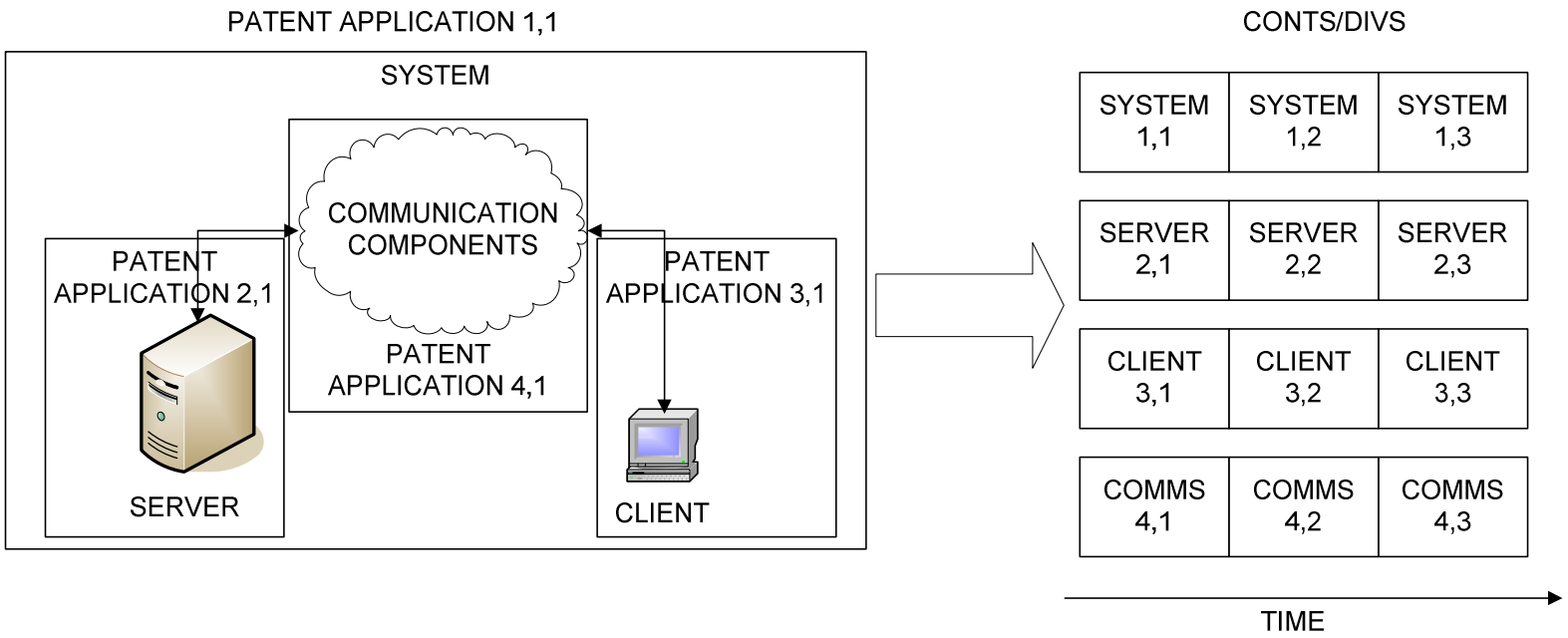
Maximizing IP (cont.)

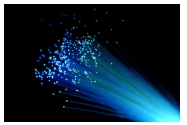
- **Not splitting up system and subsystems into separate applications:**



Maximizing IP (cont.)

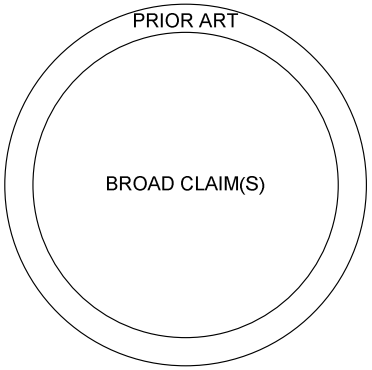
- **Splitting up system and subsystems into separate applications:**



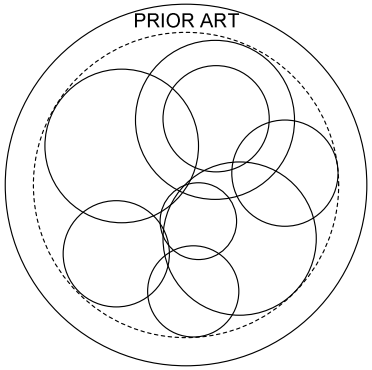


Maximizing IP (cont.)

- **Picket fence approach to IP protection:**



- Pros:
  - Captures more infringers
  - Reduces costs
  - Favors high tech
- Cons:
  - Easier to invalidate
  - Harder to prosecute
  - Disfavors low tech



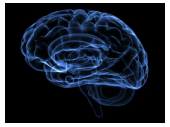
- Pros:
  - Harder to invalidate
  - Easier to prosecute
  - Favors low tech
- Cons:
  - Easier to design around
  - Increases costs
  - Disfavors high tech

Minimizing IP Costs

- **Prepare patent-like disclosures to minimize attorney time:**
  - Use patent application and drawing templates:
    - Don't pay a patent attorney rate to write "the server 20 is connected to the client 10 via communications network 5."
    - Use patent application in similar technologies as samples
  - Have patent attorney provide feedback to enable a learning process
  - Develop an in-house patent preparation capability and use patent attorney only for "value add" tasks, like claim drafting, word smithing, legal and technical analysis, etc.
  - This depends on whether or not you have "more time than money or more money than time"

Minimizing IP Costs (cont.)

- **Work with an experienced attorney:**
  - Work with a competent patent attorney who understands your business and technology, can help you navigate the IP landscape, and can help you protect your IP assets nationally and globally:
    - Factors to consider:
      - The cost-effectiveness the patent attorney provides
      - It is no secret that the most expensive piece of the IP protection puzzle is usually the patent attorney
      - Find a patent attorney that takes the time to understand your technology, revenue model, and work processes to make sure that an IP strategy is executed in a focused and efficient manner



Minimizing IP Costs (cont.)

- **Interview patent cases with examiner early and often:**
  - Personal interviews help expedite prosecution:
    - In the US, granted as a matter of right for a first office action, :
      - After a final office action, granted on a discretionary basis
    - Help avoid “prosecution history estoppel”
    - Attorney’s rapport with examiners is very important:
      - Attorney should “play well” with examiners and be highly prepared and knowledgably about the invention and prior art

A Few Important US patent cases and their technological implications

KSR v. Teleflex

- **Graham v. John Deere factors still apply:**
  - Although patentability is a matter of law, the Court held that §103 required a determination of the following questions of fact to resolve the issue of obviousness:
    - the scope and content of the prior art;
    - the differences between the claimed invention and the prior art; and
    - the level of ordinary skill in the prior art.

A Few Important US patent cases and their technological implications (cont.)

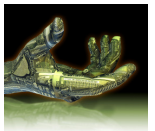
KSR v. Teleflex (cont.)

- **Graham v. John Deere factors still apply (cont.):**
  - In addition, the Court mentioned "secondary considerations" which could serve as evidence of nonobviousness. They include:
    - commercial success;
    - long felt but unsolved needs; and
    - failure of others.

A Few Important US patent cases and their technological implications (cont.)

KSR v. Teleflex (cont.)

- **TSM (Teaching, Suggestion, Motivation) – applicable as one test under a more flexible review**
- **Other Considerations:**
  - "Combination" v. Non-combination patent?
  - Design Need/Market Pressure
  - Known Problem – Predictable Solution?
  - Look at Person of Ordinary Creativity
  - Use Ordinary Common Sense



A Few Important US patent cases and their technological implications (cont.)

In re Bilski

- **USPTO Guidelines for 35 USC § 101:**
  - whether a method claim qualifies as a patent eligible process under 35 USC § 101:
    - whether the claim falls within one of the four statutory categories of invention recited in 35 USC § 101:
      - process, machine, manufacture and composition of matter:
      - The latter three categories define "things" or "products," while a "process" consists of a series of steps or acts to be performed

A Few Important US patent cases and their technological implications (cont.)

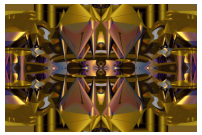
In re Bilski (cont.)

- **USPTO Guidelines for 35 USC § 101 (cont.):**
  - § 101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing
    - If neither of these requirements is met by the claim, the method is not a patent eligible process under § 101 and should be rejected as being directed to non-statutory subject matter

A Few Important US patent cases and their technological implications (cont.)

In re Bilski (cont.)

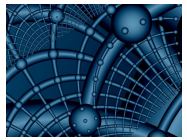
- **USPTO Guidelines for 35 USC § 101 (cont.):**
  - whether a method claim qualifies as a patent eligible process under 35 USC § 101:
    - An example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps



A Few Important US patent cases and their technological implications (cont.)

In re Bilski (cont.)

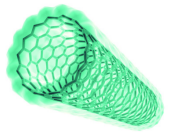
- **USPTO Guidelines for 35 USC § 101 (cont.):**
  - Thus, to qualify as a § 101 statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied:
    - for example, by identifying the apparatus that accomplishes the method steps, or
    - positively recite the subject matter that is being transformed, for example, by identifying the material that is being changed to a different state



A Few Important US patent cases and their technological implications (cont.)

In re Bilski (cont.)

- **USPTO Guidelines for 35 USC § 101 (cont.):**
  - If the claimed method is determined to be a statutory subject matter eligible process, the inquiry proceeds to determine whether the claimed invention falls within a judicial exception:
    - law of nature
    - natural phenomena
    - abstract idea



A Few Important US patent cases and their technological implications (cont.)

- **Practical considerations:**
  - Technology, technology, technology:
    - Develop computer implementations of novel manual processes
      - For example, rather than sending doctors to perform novel procedures at a patient's house, also consider implementation employing video conferencing, facial and voice recognition, etc.
    - Ensure that patent disclosures include some technological improvements
    - Disclose unexpected and unpredictable results and advantageous thereof
    - KSR and Bilski should not pose a problem to high tech inventions

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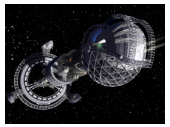

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***Mr. Villamar is licensed to practice US state law in Virginia and the District of Columbia.**

Mr. Villamar's expertise covers a wide variety of technologies, including wired, wireless, optical, terrestrial broadcast and satellite communications, neural networks, fuzzy logic and artificial intelligence, encryption, digital signal processing, speech recognition and language understanding, sound and image processing, video processing, medical imaging, video games, on-line gaming, gaming engines, physics engines, 3D graphics, virtual worlds, Digital Rights Management, e-commerce, military technologies, radar, sonar, fighter aircraft, missiles, ground guidance, heads-up displays, computers and architectures, computer networks and security, semiconductors, device manufacturing, nanotechnology, oil and gas exploration, renewable energy, electrical, solar, thermal and wind power, automotive technologies, and electromechanical technologies.

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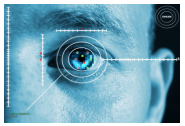

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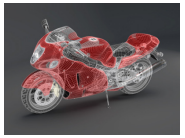

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Schwerpunkte: Internationales Handels- und Gesellschaftsrecht, Internationales Markenrecht.
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