

# SOFTWARE PATENTS:

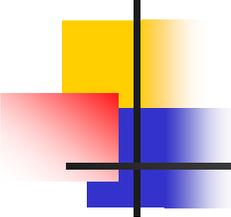
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## Protecting Software with Patents in The United States

Paul Salmon

Office of International Relations

United States Patent and Trademark Office



# Topics

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- Eligibility and Patentability Requirements for Inventions in the U.S. relevant to Software Inventions
  - Constitutional and Statutory Authority
  - U.S. Courts as to Patent Eligibility
- Brief Comparison of U.S. – Europe
- Advantages of Broad View of Protection



# What is “Software” ?

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- A “Software” invention is terminology that has been used to describe many types of process and apparatus inventions.
- “Software” inventions are treated in the same manner under U.S. law as any other claimed invention.



# Eligibility

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- “The Congress Shall have the power ... to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive rights to their respective writings and discoveries.” U.S. Constitution, Article I, Section 8.
- Concept of “useful arts” is foundation of the United States patent system.



# Eligibility

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- 35 U.S.C. 101: “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.”
- Broad View of Patent Eligibility
  - There is no “technical character” or “technical contribution” requirement for patent eligibility in the United States.
  - Congress intended scope to include “anything under the sun that is made by man” – *Diamond v. Chakrabarty*.



# Eligibility

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- 1981 - *Diamond v. Diehr*
  - Invention – Rubber molding process controlled by digital computer receiving information and applying algorithm.
- Clarified that software-related inventions can be patentable – particular if control physical process
  - Presence of algorithm will not render invention unpatentable



# Eligibility

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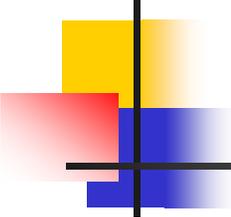
- Supreme Court in *Diehr* identified three categories of subject matter that are not patentable: (1) laws of nature, (2) natural phenomena, and (3) abstract ideas.
  - In order to be eligible for patenting, a process invention must be more than a manipulation of an abstract idea.
- Followed by number of cases by the Court of Appeals of the Federal Circuit.
  - Special Jurisdiction to hear all patent appeals regardless of trial jurisdiction



# Eligibility

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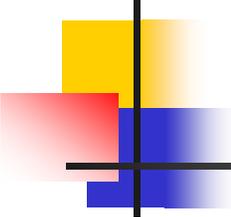
- *Arrythmia Research Tech. V. Corazonix Corp.* (Fed. Cir. 1992) –
  - Method of analyzing electrocardiograph signals is statutory subject matter
  - Process transforms one signal to another
  - Court finds this to be patentable subject matter



# Eligibility

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- *In re Alappat*, 33 F.3d 1536 (Fed. Cir. 1994)
- Invention: apparatus providing smooth waveform display in a digital oscilloscope.
- Inventions containing mathematical formulas or algorithms are not unpatentable if they contain otherwise patentable subject matter.
- Key Issue – whether the claimed invention “as a whole” has a practical application providing a “useful, concrete and tangible result”

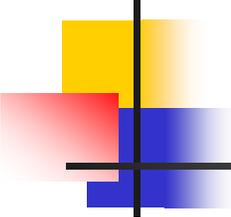


# Eligibility

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*In re Warmerdam* (Fed. Cir. 1994)

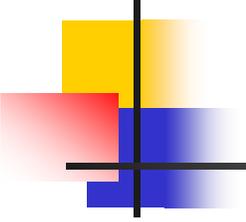
- Method for creating data structure
- Merely manipulation of abstract ideas – not statutory subject matter



# Eligibility

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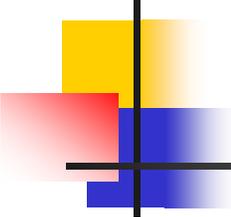
- *State Street Bank V. Signature Financial Group, Inc.*, (Fed. Cir. 1998)
  - “Hub and spoke” data processing system translating raw data into share prices.
- Data processing system is patentable because it produces a “useful, concrete and tangible result” and is therefore not merely a manipulation of an abstract idea
- Explicitly rejected notion that a “business method exception” existed under U.S. law.



# Patentability under U.S. Law

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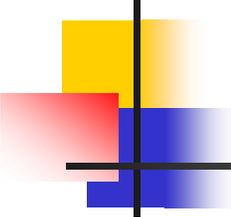
- Once an invention is considered eligible for patent protection, it must then meet the additional requirements for patentability.
- Three major requirements:
- Utility, Novelty, Non-Obviousness



# Advantages of Protection

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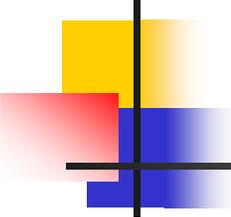
- U.S. Patent system encourages innovation and growth in emerging fields
- Increase in investment and development in computer-related processes due to e-commerce and the internet
- This has led developers in these emerging areas to seek patent protection for deserving inventions



# Advantages of Protection

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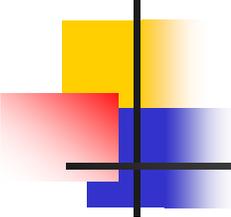
- Concern: Software and Business method patents will stifle innovation and investment.
- Experience:
  - The availability of patent protection in cutting edge technology has and will continue to facilitate the birth and growth of entire industries.
  - Criticism of these inventions mainly made with respect to novelty and non-obviousness.
  - Administrative procedures can address this, not restriction of subject matter.



# Advantages of Protection

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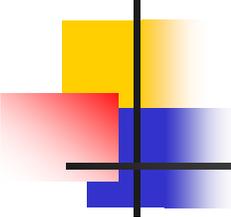
- Patent system is neutral as to field of endeavor and is designed to evolve based on the demand for protection.
- To relegate “software” to lower status would cause deserving inventions to go unprotected and investment to go unrewarded.



# Advantages of Protection

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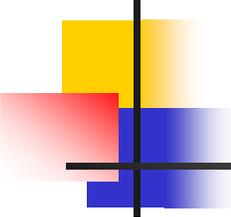
- Protection in Emerging Fields is Particularly Important for Small Entities
  - Patent may be major source of bargaining power with a larger competitor
  - Copyright protection is complementary, but not sufficient – to prevent design around
  - Promise of protection encourages investment in start-up and other small firms



# USPTO Challenges

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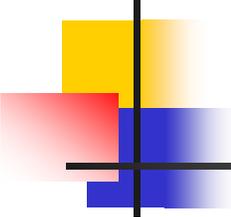
- Developing Areas do give rise to Administrative Challenges
- One Example - Business Methods Patent Initiative:
  - Expand Current Search Activities: Mandatory Search Template.
  - Improve Industry Outreach - Roundtable Discussion, Business Methods Partnership
  - "Second Layer" of Review



# Conclusion

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- Patent Protection has been shown to be an indispensable element for innovation, development and commercialization.
- The availability of patent protection in cutting-edge technologies has facilitated the birth and growth of entire industries.
- Protection of emerging fields is crucial in the age of information technology.



# Contact Information

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- Paul Salmon
  - (703) 305-9300
  - [Paul.Salmon@uspto.gov](mailto:Paul.Salmon@uspto.gov)
  
- USPTO
  - [www.uspto.gov](http://www.uspto.gov)