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At the Albuquerque Airport: Monument to the Ugly Side of Patents
Curtiss Pusher

Ruth Law in Curtiss Pusher
Agenda

• A Little History of Patents
• Nuts and bolts of Patents
• Wrights vs Bell/Curtiss
• Armstrong vs Levy
• De Forest
• Rim vs NTP
Letters Patent and Letters Close

• Letters Patent are a public disclosure of ownership -- in this case, of ideas.

• Should be win-win:
  – **Inventor** (or assignee) gets exclusive control for a limited time
  – **Society** gets detailed knowledge

• Does not always work
  – NTP vs RIM (or Wright vs Curtiss)
  – Universities
  – Pharmaceuticals
Real Estate Analogy

- A way to think about validity and infringement.
- Two identical claims can not both be valid.
- If claims are not identical, they can still infringe.
Pennsylvania

William Penn was given Pennsylvania though a “Letters Patent,” from the King Charles II of England in 1681.
Real Estate Analogy

- Two congruent patents cannot both be valid
- Overlapping patents may both be valid, with infringement
- A patent inside another may be valid, but not necessarily useful
It’s Constitutional!

US Constitution- Art. 1, Sec. 8, CL.8:

“[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 right to their respective writings and discoveries.”
Why Patents Have Value

• Stop others from
  – Any use
  – Any copying
  – Any commercial application
  – Any demonstration

• They are thus critical for maintaining an exclusive market.

• Research on Pharmaceuticals is an exception
How does anything get done?

- **Cross licensing!**
- BUT— not universities!
- Also, not NTP with RIM, or Curtiss with Wright
Intellectual Property Definitions

- **Patents** protect inventions and discoveries
  - useful processes
  - machines
  - items of manufacture
  - composition of matter
  - new and useful improvements
  - Some software, some business models

- **Copyrights** protect the original expression of ideas
  - not the ideas themselves
  - tangible medium of expression

- **Trademarks** protect terms, logos, designs
  - designates source of goods and services

- **Trade Secrets**
  - some things lose advantage in public disclosure
  - maintained in secret
Get a Patent!

• Get a good idea that’s new, *not obvious*, and necessary for business
• Write it in your lab notebook, with a witness
• Submit disclosure, with 2 witnesses
  – [www.carnegiemellonctt.com](http://www.carnegiemellonctt.com)
• Work with IP attorney to find broadest claims
• File with USPTO and internationally
  – Cost: $500 and up
  – *Or file a Provisional disclosure – a place holder*
• Wait for fame and fortune – or make a start-up
Alternatives

• Secrets: no public disclosure!
• Publication: no one can stop your own use
• Copyright
  – Free or $30
  – Applies to a concrete expression of art, or ideas
Value to Tech Companies

• Exclusivity
  – Prevent any use by anyone else
  – Venture capitalists need this

• Cross licensing
  – I’ll let you use my patents, if you’ll let me use yours

• Royalties

• Problems for Universities:
  – Royalties are the only route
  – Tax status inhibits exclusivity
  – Cross licensing not effective for non-manufacturer
US Patent office web site

www.uspto.gov
Reasons to Submit Disclosure

• It might be the next Google!
• It can unclog the bureaucracy
• It goes on your resume
• Some companies give awards for highly rated disclosures, even if not filed
Parts of a Disclosure

• First copy in lab notebook, with witness!
• Use copy disclosure form:
  – Lots of bureaucratic data
  – Diagrams and Figures
  – A description
  – What makes it new?
  – Which companies would use it (for university).
  – Usually two witnesses, mainly to establish priority
Parts of a Patent

- Background
- Description
- Claims \(\leqslant\) Very Important!
- Drawings
Tension in the system

• Exclusive use of IP encourages investment but also discourages development
• What about patents owned by universities?
• Not all granted patents are valid
  – Infringement
  – Background patents
• Owners rights versus fair use
Aircraft Control: Infringement

• Wilbur Wright
• Orville Wright
• A.G. Bell
• Glenn Curtiss

Click Figure for Patent
Superheterodyne Radio Receiver: Invalidation

Edwin H. Armstrong

Lucien Levy

Click Figure for Patent
Triode Vacuum Tube: No need to understand

Lee De Forest

Click Figure for Patent
Discussion: NTP vs RIM

• Wall Street Journal