

# PATENT PORTFOLIOS

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# **What is the value of patents?**

**(Or, if patents have value, what is it?)**

## **The traditional view:**

**Patents have a positive net expected value to their holders, via the “right to exclude” others from the marketplace.**

### **Useful for:**

**actual exclusion  
licensing  
leverage**

# And yet ...

## Growing Doubts About Patent Value

**Estimates reveal average value is likely to be insignificant; probably less than acquisition cost.**

**Extreme skew in distribution of value:  
Vast majority of patents have no apparent value.**

**Little or no ex ante visibility to distinguish the valuable patents.**

**Thus, the net value proposition for individual patents is (increasingly) uncertain at best, and likely to be negative.**

# Hence the “Patent Paradox”:

**If patents have little or no apparent value, what explains the (large) increases in patent activity?**

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## The Patent Portfolio Theory

- **In patents, the whole (a portfolio) is greater than the sum of its parts (individual patents).**
- **Patents are thus best understood as a means to a desirable end – rather than an end themselves.**
- **In the modern portfolio environment, patenting decisions are made independent of the value of individual patents. (Or ... individual patent values don't really matter.)**

**The Emerging View of Patent Value:  
(Individual) Patents confer other  
benefits on patentees.**

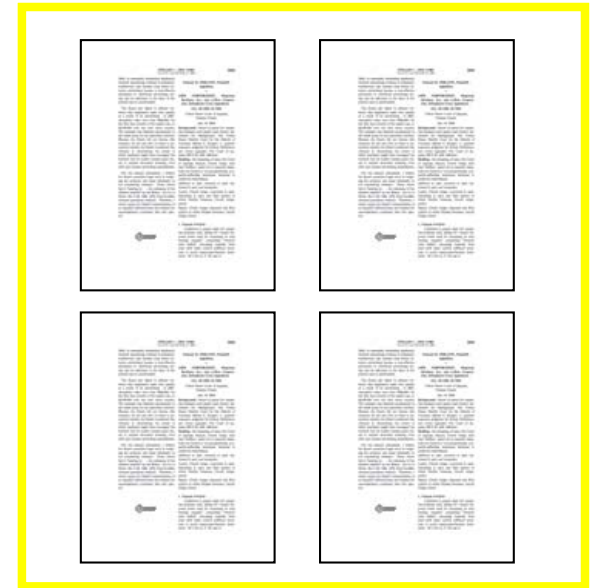
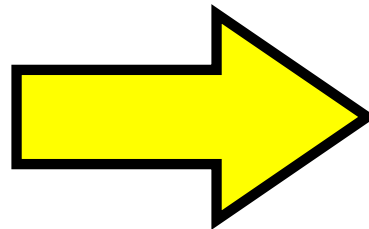
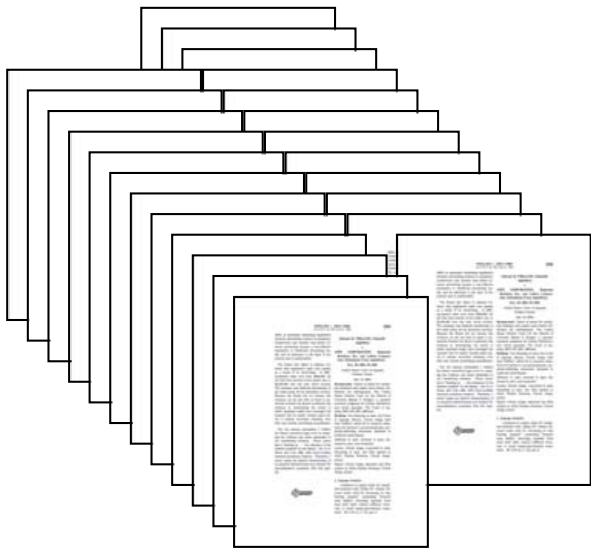
**Patent-as-signals: patents inexpensively convey valuable information about the invention, or the firm.**

**Patents-as-internal metrics: patents enable the measurement/management of innovation.**

**The patent lottery: patents offer a very small chance of a very large payoff.**

**Defensive patenting: patents to combat other patents.**

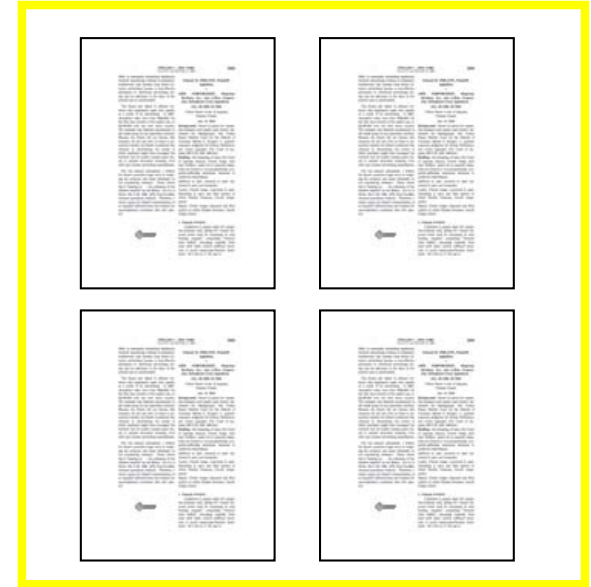
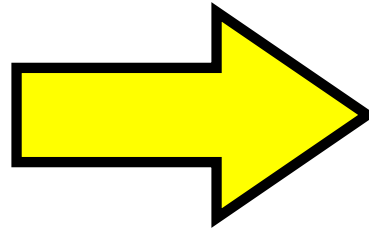
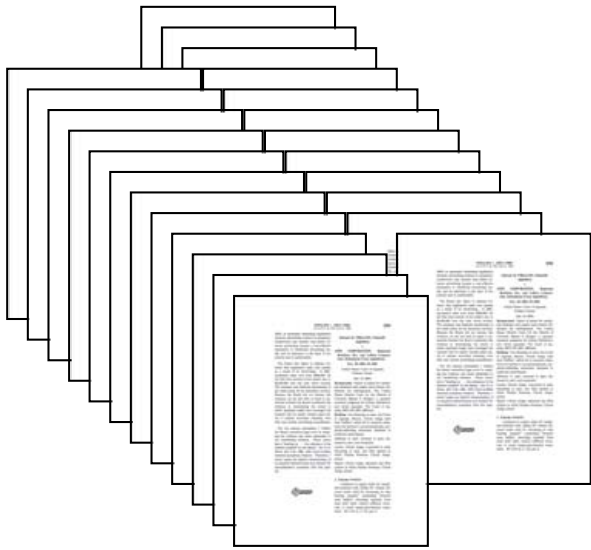
# The Patent Portfolio Theory



- 1. The modern value of patents lies not in their individual significance, but in their aggregation into a patent portfolio.**

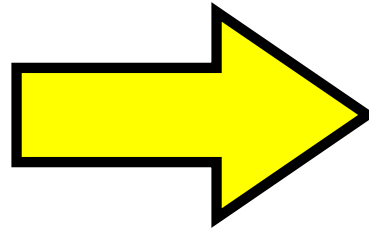
**The whole is greater than the sum of the parts.**

# The Patent Portfolio Theory



- 2. Patents are thus best understood as necessary inputs to portfolio construction, rather than as the goals themselves.**

# The Patent Portfolio Theory



- 3. Patenting will occur when the marginal benefit of building the portfolio exceeds the marginal cost of acquisition.**
- **This implies a much higher rate of patenting than under the traditional calculus—given the substantial benefits of patent portfolios, and their direct relationship to the quantity of component patents.**
  - **And reveals that patenting decisions are essentially unrelated to the value of individual patents.**



# Portfolios Solve Problems

<b>Scale (“super patents”)</b>	<b>Diversity (“hedging”)</b>
<b>Eases subsequent innovation</b>	<b>Addresses uncertainty – technology</b>
<b>Attracts related inventions</b>	<b>Expands freedom to research</b>
<b>Avoids litigation / improves bargaining / defensive</b>	<b>Addresses uncertainty – future market conditions</b>
<b>Increases voice in political economy of patent system</b>	<b>Addresses uncertainty – future competitors</b>
<b>Enhances efforts to attract capital</b>	<b>Addresses uncertainty – patent law</b>

# The Patent Portfolio Theory

## Explanatory Power

- The current high patent intensity is the expected consequence of the rise of patent portfolios, not a paradox.
- Individual patent value is largely unrelated to patenting decisions
  - if anything, an **inverse** relationship
- Feedback effects, information costs, drive portfolio strategies
- Explains Patenting Patterns
  - large firms patent more, small firms patent more carefully (thus, different firm sizes experience portfolio effects differently).
  - Increasing share of patents for small firms.
  - Patent litigation patterns.
    - less patents = more litigation (lesser portfolio effects)

# **The Patent Portfolio Theory**

## **Normative Implications**

- **Given the predictions suggested by the patent portfolio theory, we think the net effects are mostly negative.**
  - **A more complex, costly patent system.**
  - **Distributional effects.**
  - **Long-term clash with pro-competition laws.**
- **Note a few advantages, though:**
  - **Additional disclosure will be generated**
  - **A portfolio-focused innovation strategy might be beneficial**
  - **Firms are staying in the patent system, so reforms are possible**

# The Patent Portfolio Theory

## Normative Implications

- **Note that a high-volume, low-quality strategy complements other incentive-effects of the modern patent system**
  - **Deferring Clarity**
  - **Institutional Incentives**
  - **Cognitive Biases**
- **... this suggests that the incentives supporting modern patenting strategy are durable, fundamental**
  - **solutions will involve costly tradeoffs, multiple approaches**
    - **the PTO will not be able to fix this problem**

# The Patent Portfolio Theory

## Policy Options

- **Reducing low-value patents**
  - **cost-shifting to patentees**
- **Reduce information costs: the notice function of patents**
  - **claim construction, claim construction, claim construction**
  - **take disclosure requirements seriously**
- **Reducing costs of portfolios**
  - **permissive approach to mass-licensing**
- **Consider more radical approaches?**
  - **“cap and trade” for patents**

# The Patent Portfolio Theory

## Recognizing the true value of patents in the modern environment

- ✓ In patents, the whole is greater than the sum of the parts.
- ✓ Patents are the means to a desirable end (a valuable portfolio), not the end itself.
- ✓ Patenting decisions don't account for the value of individual patents.
- ✓ Patent quantity will often be the dominant strategic choice.

# PATENT PORTFOLIOS

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