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# Standards of Proof in Civil Litigation: An Experiment from Patent Law

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# Presumption of Validity

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Section 282 of the Patent Act:

- “A patent shall be presumed valid.”
- “The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.”



# Microsoft v. i4i

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## Federal Circuit / i4i:

- Burden of proof: clear and convincing evidence.

## Microsoft:

- Burden of proof: preponderance of the evidence.
- In the alternative, “hybrid” burden:  
Clear and convincing evidence, but preponderance of the evidence if “defense of invalidity [is] based on prior art that the examiner did not review during the prosecution of the patent-in-suit.” i4i, 131 S. Ct. at 2244.



# Microsoft v. i4i

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- Supreme Court held invalidity must be proven by clear and convincing evidence.
- But “jury may be instructed to consider that it has heard evidence that the PTO had no opportunity to evaluate before granting the patent.” i4i, 131 S. Ct. at 2251.



# Study Objective

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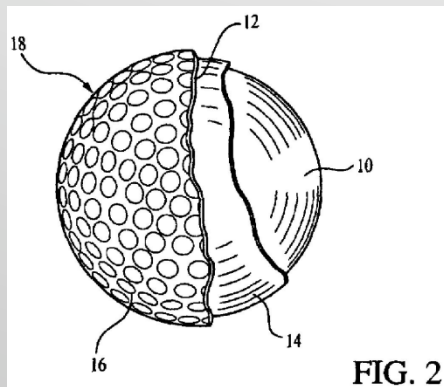
- Would modifying or eliminating the clear and convincing burden of proof result in different outcomes by juries regarding patent invalidity?



# Experiment Design

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- Short fact pattern simulating the information considered by jurors in a patent infringement lawsuit.



Callaway Golf Co. v. Acushnet Co.,  
576 F.3d 1331 (Fed. Cir. 2009).

- Key piece of prior art not disclosed to PTO in prosecution.

# Experiment Design

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- Jury instruction with one of three randomly-assigned burdens of proof (based on APLA model):
  - Clear and convincing
  - Clear and convincing w/i4i-type instruction

“The burden of proving obviousness is more easily satisfied when, as in this case, the prior art on which the claim of obviousness is based was not considered by the Examiner.”
  - Preponderance of the evidence



# Experiment Design

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- Respondents asked about decision on obviousness
- Validation questions
- Demographic questionnaire





# Experiment Design

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- Subjects recruited through Amazon Mechanical Turk: [www.mturk.com](http://www.mturk.com) ( $N = 500$ ).
  - Restricted to U.S.-based respondents (IP address)
  - Jury-eligible population
  - Minimal compensation (\$2/survey)
- Median response time: 11 minutes
  - 5% percentile: 5 minutes
  - 95% percentile: 33 minutes



# Amazon Mechanical Turk

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- Experimental social science on Mechanical Turk:
  - John J. Horton, David Rand & Richard J. Zeckhauser, The Online Laboratory: Conducting Experiments in a Real Labor Market, 14 J. Experimental Econ. 399 (2011).
  - Gabriele Paolacci, Jesse Chandler & Panagiotis G. Ipeirotis, Running Experiments on Amazon Mechanical Turk, 5 Judgment & Decision Making 411 (2010).
  - John Bohannon, Social Science for Pennies, 334 Sci. 307 (Oct. 20, 2011).
- Law reviews using Mechanical Turk
  - Janice Nadler & Mary-Hunter McDonnell, Moral Character, Motive, and the Psychology of Blame, 97 Cornell L. Rev. 255, 273 (2012) (testing how moral character influences perceptions of blame, responsibility and causation).
  - Paul H. Robinson et. al., The Disutility of Injustice, 85 N.Y.U. L. Rev. 1940, 1999 (2010) (testing attitudes toward criminal justice system)
  - Christopher Sprigman, Christopher Buccafusco, and Zachary Burns, Valuing Attribution and Publication in Intellectual Property



# Respondent Demographics

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- SEX: 61% female, 39% male
- AGE: 61% 18-35; 38% 35-64; 1% 65+
- RACE/ETHNICITY: 82% white; 7% African-American; 5% Hispanic; 4% Asian-American; 3% other
- EDUCATION: 12% high school degree or less; 40% some college; 36% college graduate; 12% advanced degree
- SCIENCE DEGREE: 18.2% of all respondents

*Note: Totals may not equal 100% due to rounding*



# Preliminary Results – Experiment #1

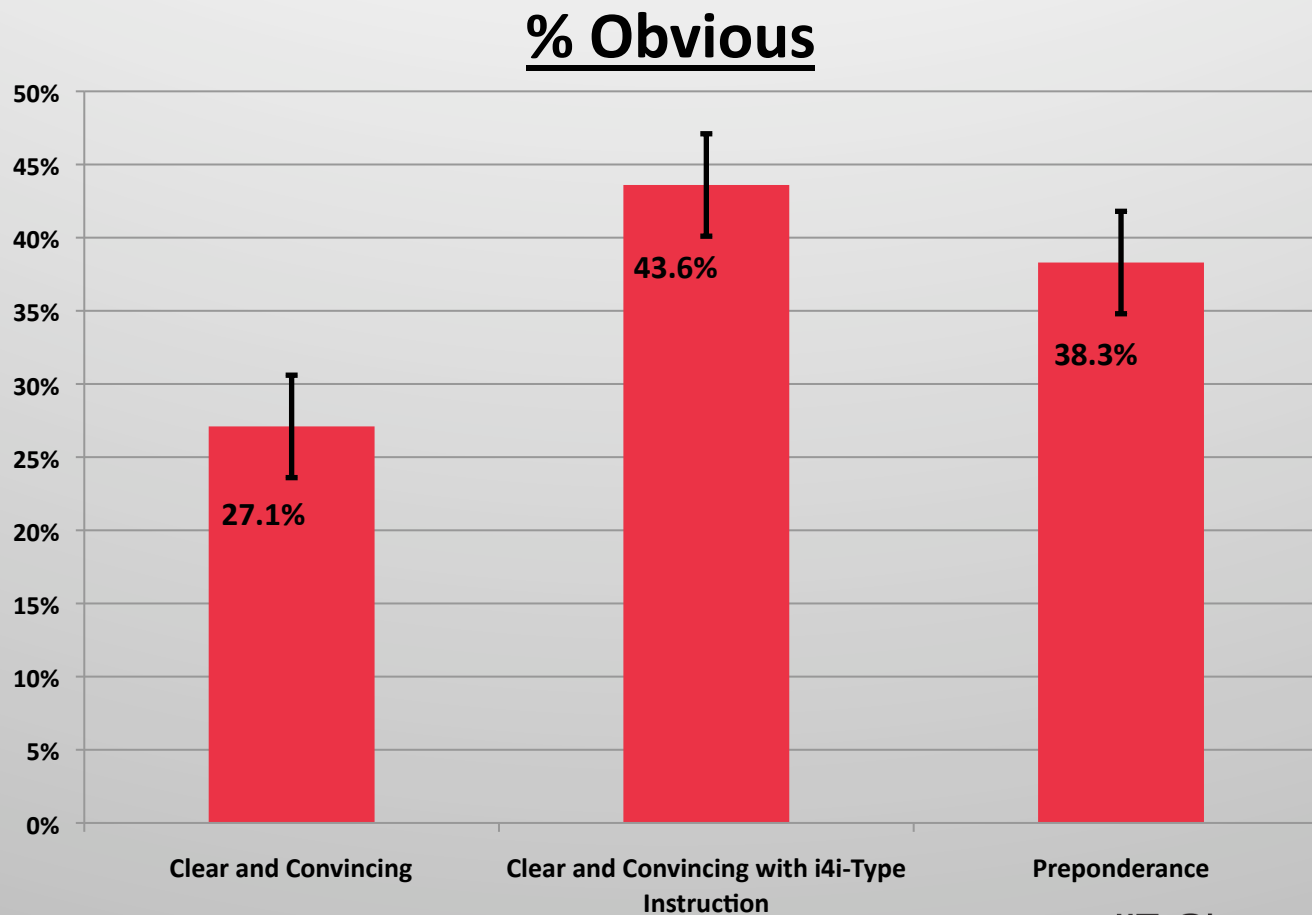
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- “Did [the accused infringer] prove by {clear and convincing evidence / a preponderance of the evidence} that [the patentee]’s patent was obvious?”



# Preliminary Results – Experiment #1

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# Experiment #2

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- **Control (same as first experiment)**

"The burden of proving obviousness **is** more easily satisfied when, **as in this case**, the prior art on which the claim of obviousness is based was not considered by the Examiner."

- **Variation #1**

"The burden of proving obviousness **is** more easily satisfied when the prior art on which the claim of obviousness is based was not considered by the Examiner." ("in this case" clause removed).

- **Variation #2**

"**In this case**, the prior art on which the claim of obviousness is based was not considered by the Examiner. This **may** make it easier to satisfy the burden of proving obviousness."



# Implications

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- Standards of proof matter
  - Preponderance is different from clear & convincing
- But sometimes in unexpected ways
  - But is the mechanism the same for preponderance and the i4i-type instruction?



# Potential Next Steps

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- Repeat with different fact pattern
- Use video clips for parties' arguments and jury instructions
- In-person group deliberations with jury-eligible subjects





# Thank you!

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