



What Happens in a Patent Lawsuit

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PREPARED FOR

AES



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<< Perhaps It's Not The Entertainment Industry's... Can We Get A Few Mo




Jury Tells Microsoft To Pay \$1.5 Billion To Alcatel-Lucent Over MP3 Patents

from the *mp3-tech-to-get-more-expensive dept*

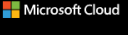
Jury trials over patent disputes quite often turn out in favor of the patent holder, so it's not surprising to see that a jury in San Diego hasn't just sided with Alcatel-Lucent in its patent dispute with Microsoft, but also has **ordered that Microsoft pay \$1.5 billion for supposedly violating** patents having to do with MP3 technology. The details of the case are a little bit complex. [B...](#)

Legal Issues
by Mike Masnick
Thu, Feb 22nd 2007
2:00pm



EDITION: U.S.

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This cloud redefines winning. [Expand to see how](#)

Technology | Fri Jul 25, 2014 4:46pm EDT Related: TECH, MEDIA

Bose sues Beats over headphone noise-cancellation patents

BY ANDREW CHUNG

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PTAB Won't Review Hybrid Audio MP3 Patent

By Matthew Bultman

Law360, New York (January 4, 2017, 6:53 PM EST) -- Technology industry consortium Unified Patents Inc. has failed to convince the Patent Trial and Appeal Board that claims in a widely asserted patent related to MP3 processing technology are likely invalid, the board said in a Tuesday decision.

Apple sued by THX over iMac, iPad, and iPhone speaker design

by Amar Toor | @amartoo | Mar 16, 2013, 9:00am EDT

This presentation is not legal advice.
Please consult an attorney.

Patent Litigation – What's a Patent

United States Patent [19] Brandenburg et al.

[11] Patent Number: 5,040,217
[45] Date of Patent: Aug. 13, 1991

- [54] PERCEPTUAL CODING OF AUDIO SIGNALS
- [75] Inventors: Karlheinz Brandenburg, Stirling; James D. Johnston, Warren, both of N.J.
- [73] Assignee: AT&T Bell Laboratories, Murray Hill, N.J.
- [21] Appl. No.: 423,088
- [22] Filed: Oct. 18, 1989
- [51] Int. Cl.³ G10L 5/00
- [52] U.S. Cl. 381/47
- [58] Field of Search 381/40-49

References Cited

U.S. PATENT DOCUMENTS

- 4,881,267 11/1989 Taguchi 381/40
4,945,567 7/1990 Ozawa 381/49

OTHER PUBLICATIONS

- "Digital Audio Tape for Data Storage", *IEEE Spectrum*, Oct. 1989, pp. 34-38, E. Tan and B. Vermeulen.
- "Critical Bands", *Foundations of Modern Auditory Theory*, J. V. Tobias, Chapter 5, B. Scharf, Academic Press, New York, 1970.
- "Optimizing Digital Speech Coders by Exploiting Masking Properties of the Human Ear", *Journal of Acoustical Society of America*, vol. 66 (6), Dec. 1979, pp. 1647-1652, M. R. Schroeder et al.
- "MSC: Stereo Audio Coding with CD-Quality and 256 kBIT/SEC", *IEEE Transactions on Consumer Electron-*

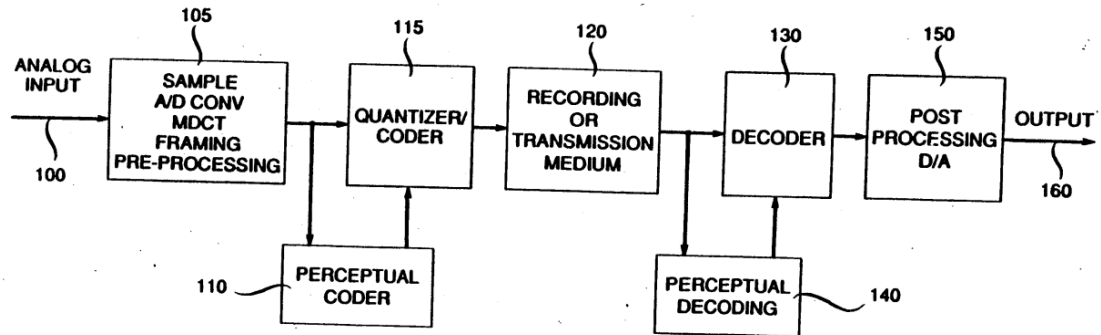
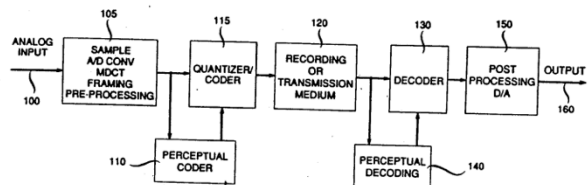
- ics*, vol. CE-33, No. 4, Nov. 1987, pp. 512-519, E. F. Schroeder and H. J. Platte.
- "Transform Coding of Audio Signals Using Perceptual Noise Criteria", *IEEE Journal on Selected Areas in Communications*, vol. 6, No. 2, Feb. 1988, pp. 314-323, J. D. Johnston.
- N. S. Jayant and P. Noll, *Digital Coding of Waveforms—Principles and Applications to Speech and Video*, Chapter 12, "Transform Coding".
- "Sub-band Transform Coding Using Filter Bank Designs Based on Time Domain Aliasing Cancellation," *IEEE ICASSP*, 1987, J. Princen et al., pp. 2161-2164.
- FX/FORTRAN Programmer's Handbook*, Alliant Computer Systems Corp., Jul. 1988.

Primary Examiner—Emanuel S. Kemeny
Attorney, Agent, or Firm—W. Ryan

ABSTRACT

A method is disclosed for determining estimates of the perceived noise masking level of audio signals as a function of frequency. By developing a randomness metric related to the euclidian distance between (i) actual frequency components amplitude and phase for each block of sampled values of the signal and (ii) predicted values for these components based on values in prior blocks, it is possible to form a tonality index which provides more detailed information useful in forming the noise masking function. Application of these techniques is illustrated in a coding and decoding context for audio recording or transmission. The noise spectrum is shaped based on a noise threshold and a tonality measure for each critical frequency-band (bark).

16 Claims, 3 Drawing Sheets



We claim:

1. A method of processing an ordered time sequence of audio signals partitioned into contiguous blocks of samples, each such block having a discrete short-time spectrum, $S(\omega_i)$, $i = 1, 2, \dots N$, for each of said blocks, comprising
 - predicting, for each block, an estimate of the values for each $S(\omega_i)$ based on the values for $S(\omega_i)$ for one or more prior blocks,
 - determining for each frequency, ω_i , a randomness metric based on the predicted value for each $S(\omega_i)$ and the actual value for $S(\omega_i)$ for each block, based on said randomness metrics, and the distribution of power with frequency in the block, determining the value of a tonality function as a function of frequency, and
 - based on said tonality function, estimating the noise masking threshold at each ω_i .

Patent Litigation – What's a Patent



Patent Litigation – What's a Patent

**1st Inventor:
Hamburger**

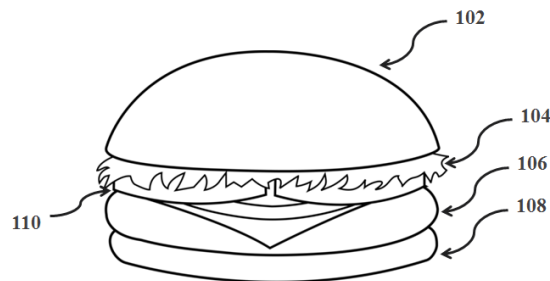


**2nd Inventor:
Cheeseburger**



Example: Cheeseburger Patent

(12) United States Patent Millikan		(10) Patent No.: US 9,999,999B1 (45) Date of Patent: Jan. 2, 2001	
(54) LAYERED SANDWICH PRODUCT		4,734,857 3/1988 Fujiwara et al. 364/401 4,821,186 4/1989 Munakata et al. 364/405 4,843,547 * 6/1989 Fuyama et al. 364/405 4,903,200 * 2/1990 Mosok, Jr. 364/405 5,053,957 10/1991 Suzuki 364/405 5,128,862 7/1992 Mueller 364/405 5,297,030 * 3/1994 Vossigh et al. 364/405 5,377,097 12/1994 Fuyama et al. 364/405 5,406,035 4/1995 Wallisch 364/401 5,481,094 1/1996 Suda 235/483 5,504,675 4/1996 Cragun et al. 364/401 5,589,676 * 12/1996 Iguchi 235/7 R 5,602,730 2/1997 Coleman et al. 395/215	
(75) Inventors: Thomas Millikan, San Diego, CA			
(73) Assignee: Tom's Burgers LLC			
(*) Notice: Under 35 U.S.C. 154(b), the term of this patent shall be extended for 0 days.			
(21) Appl. No.: 11/123,456		* cited by examiner	
(22) Filed: Sep. 25, 1998		Primary Examiner—Karl D. Frech Assistant Examiner—Daniel St. Cyr	
(51) Int. Cl. ⁷ G07G 1/00		(57) ABSTRACT	
(52) U.S. CL. 235/7 R; 235/12; 705/16		A layered sandwich that has several layers of different categories of food items. The sandwich can have several layers, including those of meat, cheese, vegetables, and bread.	
(58) Field of Search 235/7 R, 8, 12, 235/15, 375, 378; 705/16, 20			
(56) References Cited			
U.S. PATENT DOCUMENTS			
4,547,851 10/1985 Kurland 364/401 4,553,222 11/1985 Kurland et al. 364/400 4,725,212 2/1988 Mindrum et al. 364/601		8 Claims, 15 Drawing Sheets	



What is claimed is:

1. A method for making a layered sandwich, the method comprising:
grilling a layer of ground beef; and
melting a layer of cheese onto

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Patent Litigation – Stages



Pre-suit / Filing

Contentions

Expert
Reports

Motions

Trial

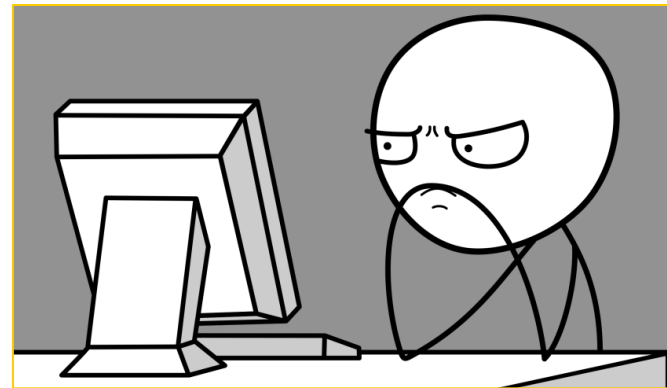
Plaintiff

- Cannot file suit without some investigation
- Study: your patents, their products, their patents



Defendant

- Waiting



- Can file suit if plaintiff threatens suit

Pre-suit / Filing

Contentions

Expert
Reports

Motions

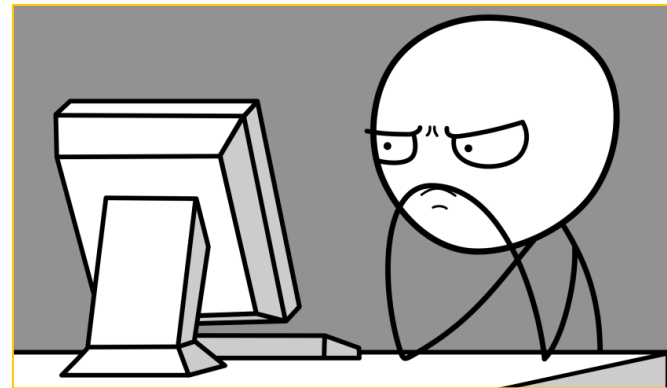
Trial

Plaintiff

- What do your claims say?
 - Require “grilling” and “melting”
- What does the product have?
 - Who grills v. who fries?
 - Who grills burger patties with cheese v. who places cheese onto already grilled patties?
 - Can your claims cover both?

Defendant

- Waiting



- Can file suit if plaintiff threatens suit

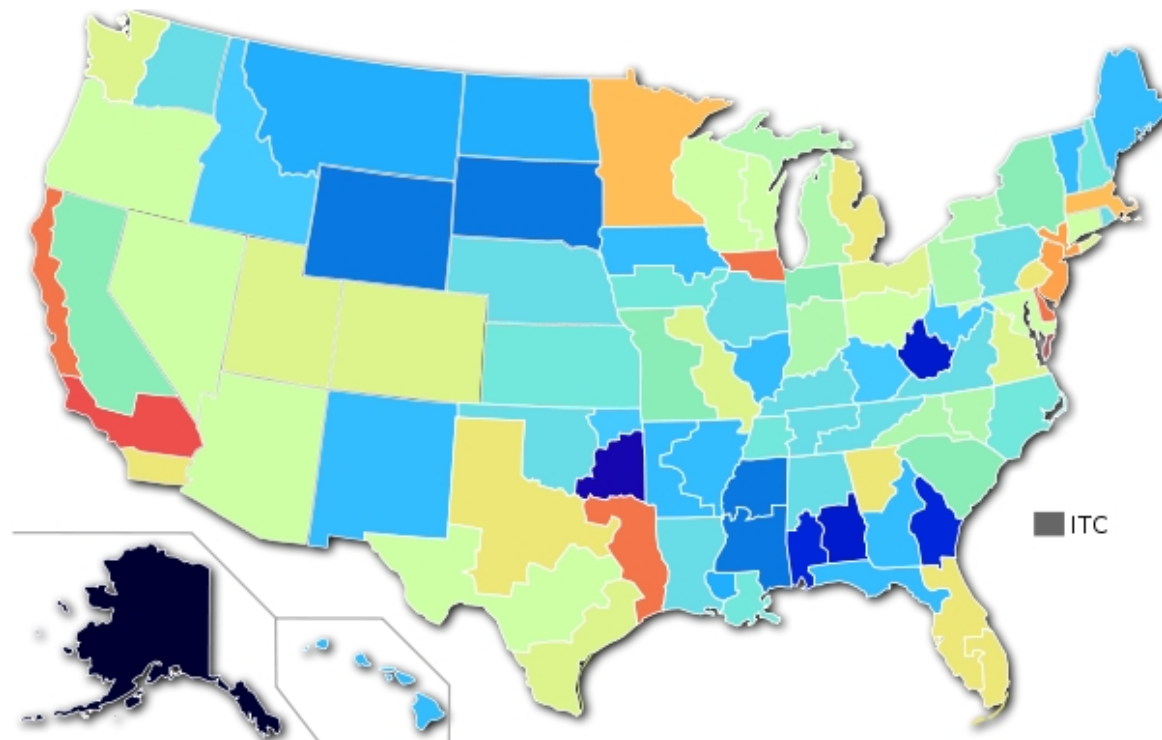
Pre-suit / Filing

Contentions

Expert Reports

Motions

Trial



LEGEND

LEAST CASES MOST CASES

Pre-suit / Filing

Contentions

Expert
Reports

Motions

Trial

Plaintiff

- Plan licensing campaign
- Prove infringement
- Defend the patent
- Demand money
- Exclude competitor

Defendant

- Prove no infringement
- Prove invalidity
- Attack the patent
- Diminish the value
- Design around



Pre-suit / Filing

Contentions

Expert
Reports

Motions

Trial

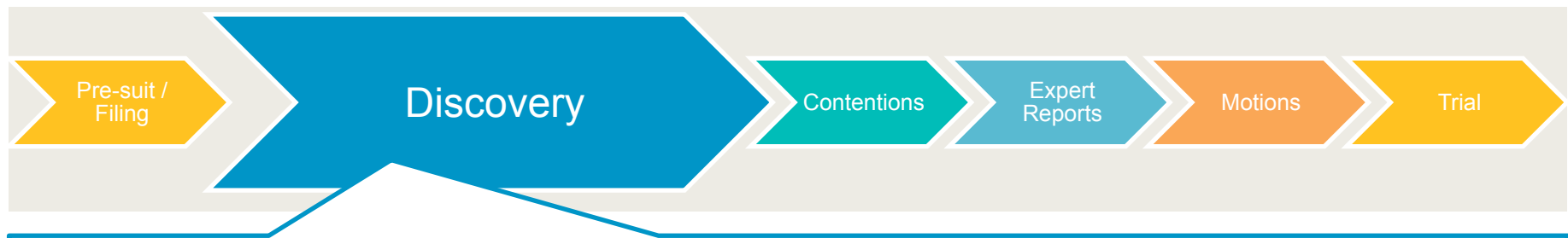
Plaintiff

- Plan licensing campaign
 - Who makes and sells cheeseburgers?
- Prove infringement
 - Investigate products
- Demand money
- Exclude competitor



Defendant

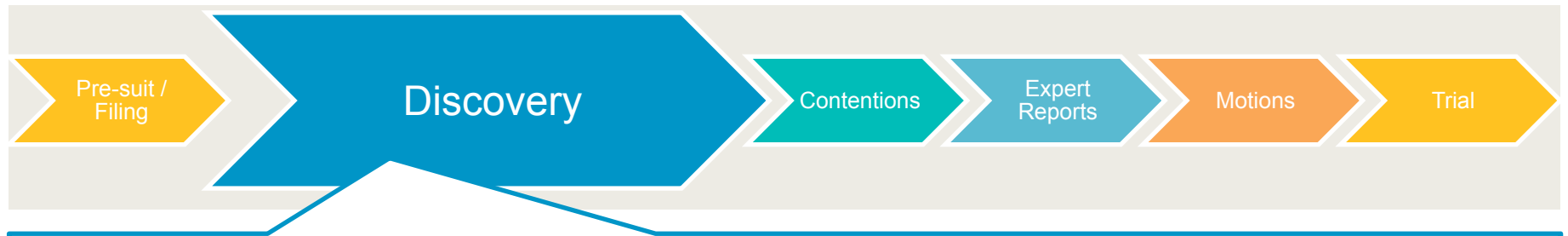
- Prove no infringement
 - Frying, not grilling.
 - Cheese placed after frying.
- Prove invalidity
 - Grilling cheeseburgers was well known
- Design around
 - Place a layer of lettuce between the patty and cheese



Tools of Discovery

- Documents
- Interrogatories (Q & A)
- Requests for Admissions (Accusation and Yes/No)
- Depositions
- Subpoenas to third parties
- Ask the Court for Help





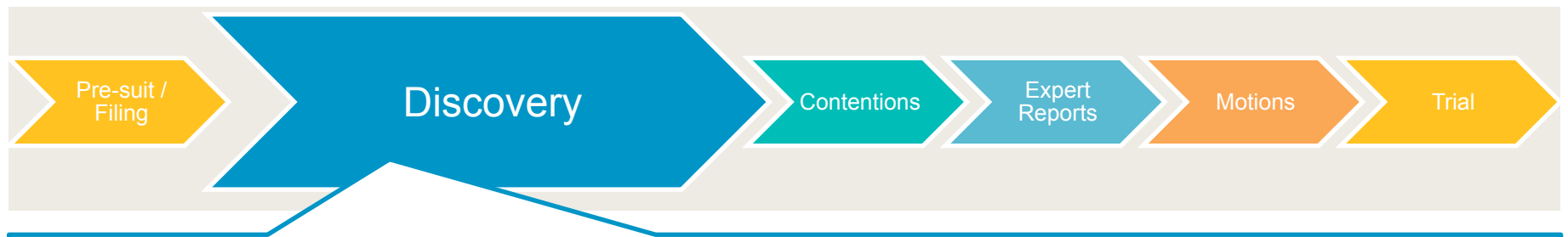
Plaintiff

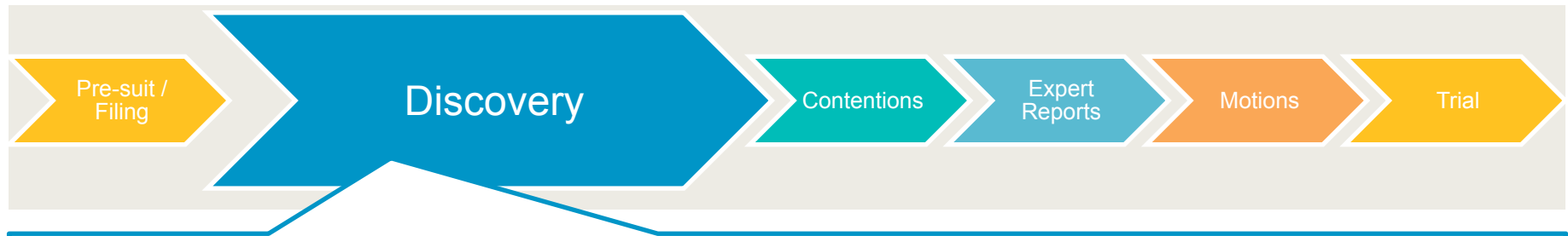
- Source Code
- Schematics
- Financials
- Emails



Defendant

- Prior Patents
- Prior Publications
- Prior 3rd party systems
- Licenses to the patents
- Emails





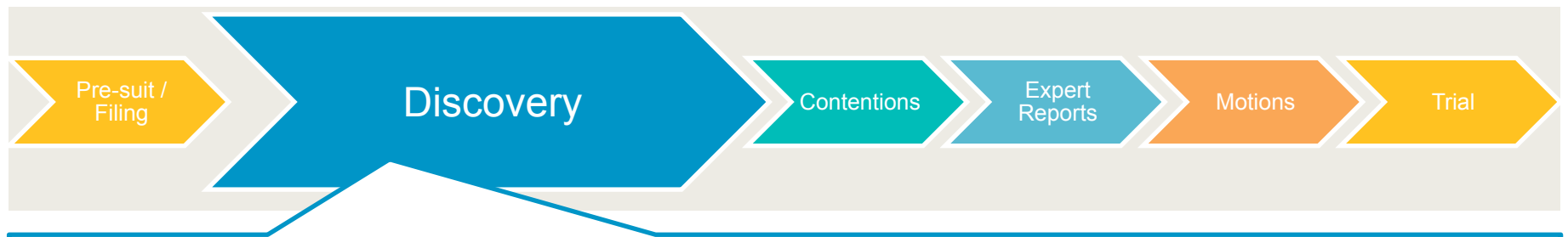
Plaintiff

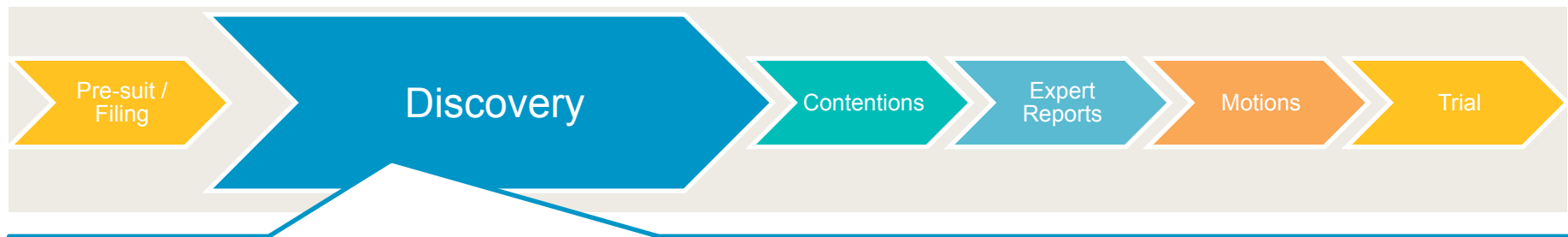
- Depose engineers
- Depose accountants
- Depose 3rd parties



Defendant

- Depose inventors
- Depose patent attorneys
- Depose authors
- Depose 3rd party engineers
- Depose 3rd parties





Plaintiff

- Depose defendant's cooks and chefs
- Depose accountants



Defendant

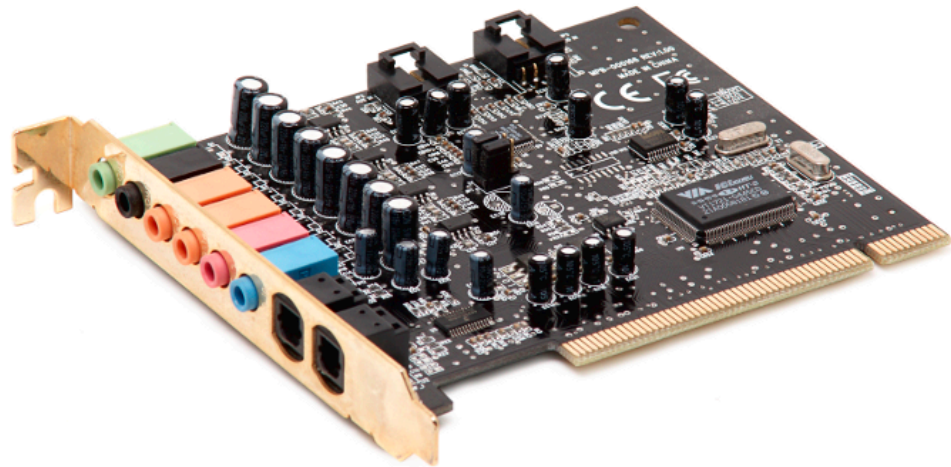
- Depose inventors
- Depose patent attorneys
- Depose authors
- Depose 3rd parties who grilled and sold cheeseburgers before





Plaintiff

- Infringement
- Technical features
 - Source code
 - Data sheets
 - Product analysis



Pre-suit /
Filing

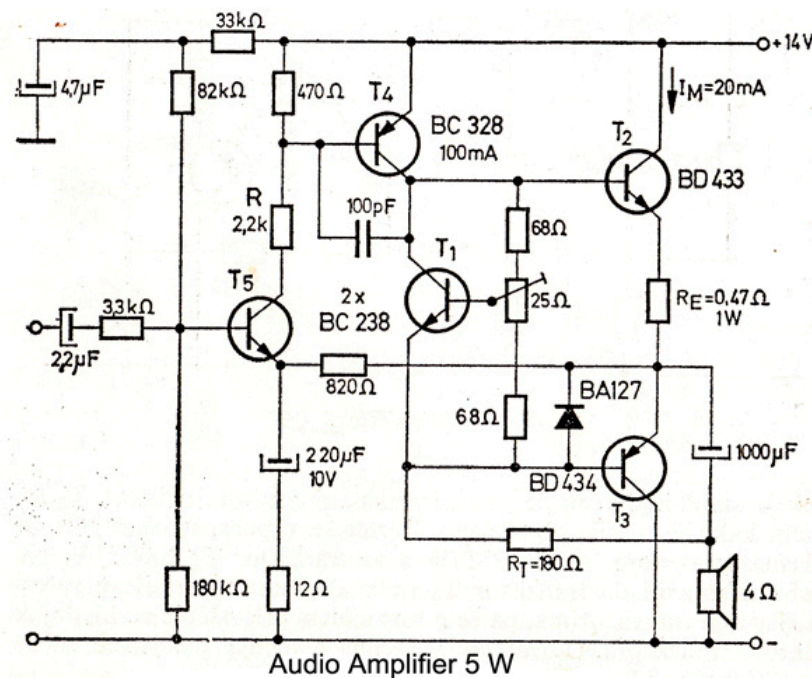
Discovery

Contentions

Expert
Reports

Motions

Trial



Defendant

- Invalidity
- Teachings of prior art
 - Patents
 - Publications
 - Systems
- Patent deficiencies



Plaintiff

- **Infringement**
 - Technical analysis of the cheeseburger – what are the layers and how are they made
- **Technical features**
 - Company recipes and cooking instructions
 - Product analysis



Pre-suit /
Filing

Discovery

Contentions

Expert
Reports

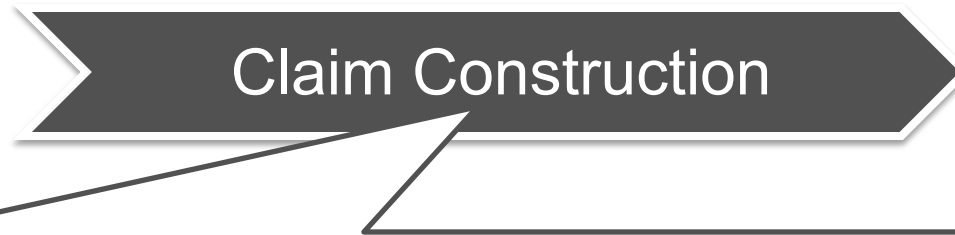
Motions

Trial



Defendant

- Invalidity
 - Other companies made cheeseburgers before
 - Many cookouts where cheeseburgers were made
- Teachings of prior art
 - Cookbooks described making cheeseburgers



Plaintiff

- Broad claims
- Match products
- Protect patent



Defendant

- Narrow claims
- Avoid products



Claim Construction

Plaintiff

- **Broader –**
 - Grilling includes frying
 - Melting of cheese can occur through heat of already grilled burger

Defendant

- **Narrower –**
 - Grilling does not include frying
 - Cheese must be melted during grilling

What is claimed is:
1. A method for making a layered sandwich, the method comprising:
grilling a layer of ground beef; and
melting a layer of cheese onto



Plaintiff's Expert

- **Infringement Report**
 - Opinions
- **Validity Report**
 - Opinions, Rebuttal

Defendant's Expert

- **Invalidity Report**
 - Opinions
- **Noninfringement Report**
 - Opinions, Rebuttal





Plaintiff's Expert

- **Infringement Report**
 - Defendant grills and melts
- **Validity Report**
 - The process of grilling and melting is novel



Defendant's Expert

- **Invalidity Report**
 - Grilling cheese burgers – not novel
 - Several companies and individuals grilled cheeseburgers
- **Noninfringement Report**
 - Defendant does not grill or melt cheese – entirely different product





Inter partes review

- Not Federal Court – USPTO
- Challenge validity - publications
- Fixed, speedy timetable (18 months)
- Judges have engineering degrees
- Trend: settling
- Less expensive



Pre-suit /
Filing

Discovery

Contentions

Expert
Reports

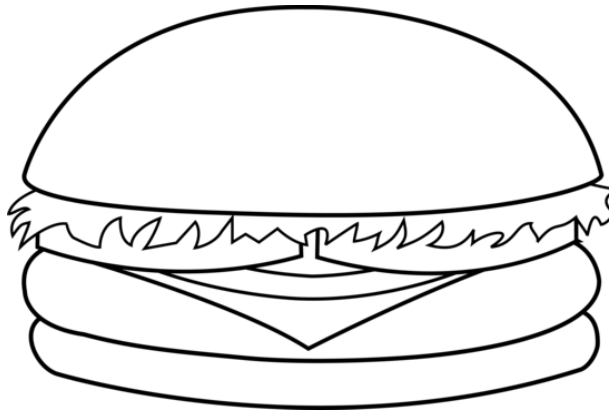
Motions

Trial

Detour: USPTO Challenges

Inter partes review

- Have a panel of judges with a culinary education determine if grilling cheeseburgers is novel





Summary judgment

- Judge decides
- Factual record set
 - No dispute
 - Party lacks facts
- Invalidity
- Infringement
- Other legal theories





Summary judgment

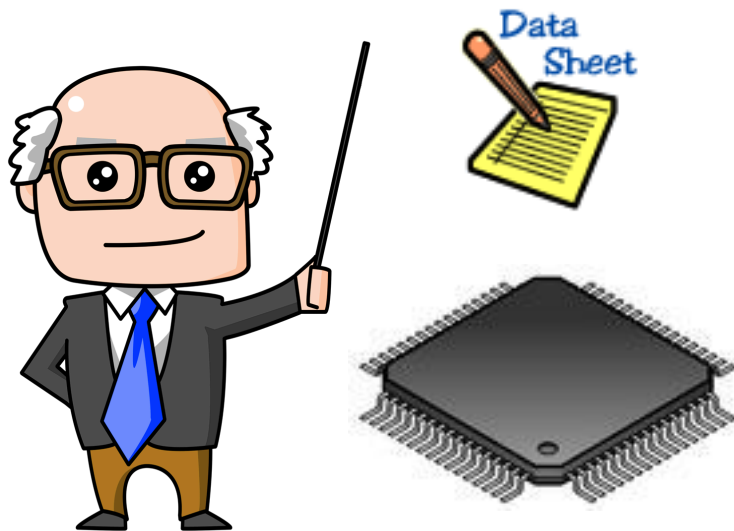
- Factual Record Set
- Invalidity
 - Tom grilled cheeseburgers at a cookout in 1997
 - Tom sent invitations describing the cheeseburgers he would grill and 10 people showed up and saw him grill
- Infringement
 - Defendant's cooks admit that they grill cheeseburgers





Summary judgment – non-infringement example

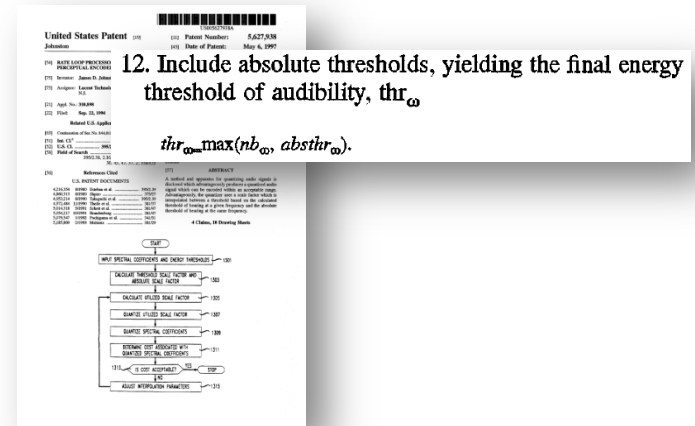
- I did not do any testing of any kind
- Default register values show feature turned off





Non-infringement example— Dolby AC-3

- “Absolute hearing threshold” – “an estimate of the level at which the quietest sounds can be perceived by the human auditory system”
- Dr. Karlheinz Brandenburg – hth curve not absolute hearing threshold
- Engineers – modified ISO curve
- Used thresholds differ





Witnesses describe facts and tell story

- Experts
- Corporate representatives
- Other fact witnesses





Witnesses are cross-examined

- Impeach
 - Deposition testimony
 - Prior statements
- Expose weaknesses





Witnesses are cross-examined

- Expose weaknesses
 - Has no grilling experience





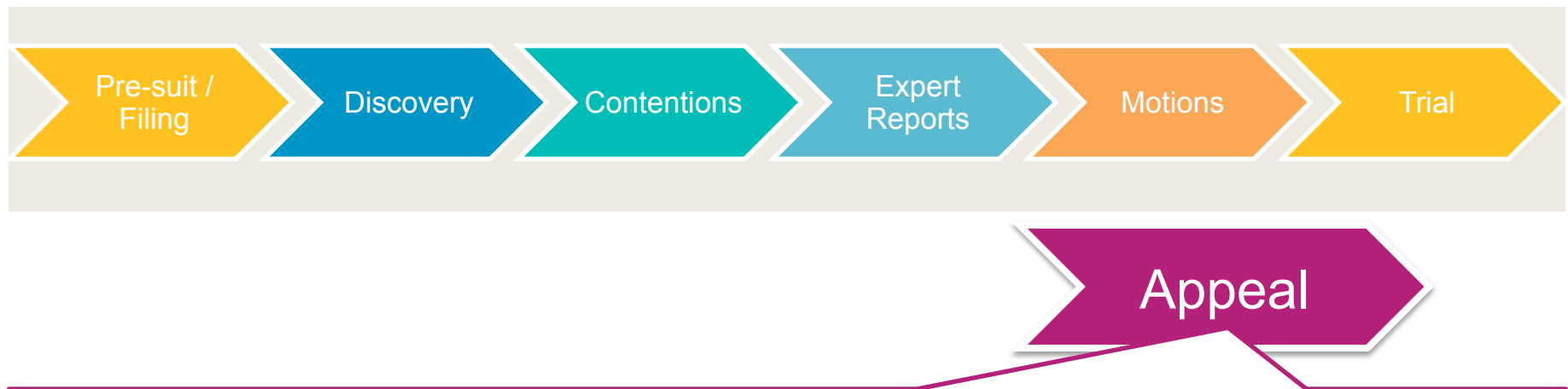
Jury decides between competing facts

ACME
CORPORATION




INITECH





Trial court decision can be appealed

- De novo
 - Legal (e.g., claim construction)
- Clearly erroneous
 - Findings of facts
- Abuse of discretion
 - Including / excluding evidence





Any time – parties can settle

- Protect licensing campaign
- Risky to have motions come to decision
- Risky to try facts





So what's this going to cost me?

- Patent case up to trial: \$1.4M
- Patent case through trial: \$2.1M
- IPR to file: \$100k
- IPR through trial: \$350k





QUESTIONS?

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Consultant



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