

**FEDERAL CIRCUIT YEAR IN REVIEW**

**March 10, 2008**

**by Paul Fleischut  
with Nick Keppel, Marc Vander Tuig, and Nancy Swiezynski**

SUMMARY OF CASES DISCUSSED

Case Summary Sandisk Corporation v. STmicroelectronics

Facts:

1. Both parties own patents related to flash memory devices
2. April 16, 2004, ST requests a meeting to discuss a cross-license agreement. The letter listed eight patents owned by ST that "may be of interest" to SanDisk.
3. July 12, 2004, ST sends 2nd letter to SanDisk, again requesting a meeting and listing four additional ST patents that "may also be of interest" to SanDisk.
4. August 27, 2004, the licensing meeting was held. ST's vice president of IP, two ST licensing attorneys, and three technical experts retained by ST to perform the infringement analyses of SanDisk's products, attended on behalf of ST. SanDisk's chief counsel and an engineer attended on behalf of SanDisk. ST presented a slide show which compared statistics regarding SanDisk's and ST's patent portfolios, revenue, and research and development expenses, and listed SanDisk's various "unlicensed activities." This slide show was followed by a four- to five-hour presentation by ST's technical experts, during which they identified and discussed the specific claims of each patent and alleged that they were infringed by SanDisk. The presentation by ST's technical experts included "mapp[ing] the elements of each of the allegedly infringed claims to the aspects of the accused SanDisk products alleged to practice the elements." SanDisk's engineer then made a presentation, describing several of SanDisk's patents and analyzing how a semiconductor chip product sold by ST infringes. ST also provided SanDisk a packet of materials containing, for each of ST's fourteen patents under discussion, a copy of the patent,

- reverse engineering reports for certain of SanDisk's products, and diagrams showing how elements of ST's patent claims cover SanDisk's products.
5. At the end of the meeting, ST's representative promised SanDisk that it would not sue.
  6. September 2004, SanDisk sends ST two confidential cross licensing offers, which noted that the offer would expire on September 27, 2004. ST destroyed the confidential offers and requested non-confidential cross-licensing offers.
  7. October 15, 2004, after several further e-mails and phone calls between the business representatives trying to establish another meeting, SanDisk filed a declaratory judgment suit, alleging that ST's patents are invalid.

Procedure:

1. District Court granted ST's motion to dismiss for lack of subject matter jurisdiction. The court found that no actual controversy existed for the purpose of the Declaratory Judgment Act because SanDisk did not have an objectively reasonable apprehension of suit
2. District Court followed Federal Circuit's holding in Arrowhead Indus. Water, Inc. v. Ecolochem, Inc. and its lineage: Two part test to govern whether a controversy exists for the purposes of the Declaratory Judgment Act in a patent infringement case:
  - A. Does conduct by patentee create a reasonable apprehension on the part of the DJ plaintiff that it will face an infringement suit?
  - B. Does conduct of DJ plaintiff amount to infringing activity or demonstrate concrete steps taken with the intent to conduct such activity?
3. SanDisk appealed the district court's grant
4. Between the District Court's dismissal and appeal, Supreme Court issued its decision in MedImmune, Inc. v. Genentech, which rejected the Federal Circuit's reasonable apprehension of suit test and held that in the context of a licensor-licensee agreement, licensee need not repudiate the agreement by withholding royalties prior to filing a DJ action to hold the patent invalid.
5. Federal Circuit reconsidered Arrowhead in view of the Supreme Court's MedImmune decision and held:

where a patentee asserts rights under a patent based on certain identified ongoing or planned

activity of another party, and where that party contends that it has the right to engage in the accused activity without license, an Article III case or controversy will arise and the party need not risk a suit for infringement by engaging in the identified activity before seeking a declaration of its legal rights.

6. What are the outer boundaries? Fact dependent. The Federal Circuit attempted to define some boundaries:

In the context of conduct prior to the existence of a license, declaratory judgment jurisdiction generally will not arise merely on the basis that a party learns of the existence of a patent owned by another or even perceives such a patent to pose a risk of infringement, without some affirmative act by the patentee. But Article III jurisdiction may be met where the patentee takes a position that puts the declaratory judgment plaintiff in the position of either pursuing arguably illegal behavior or abandoning that which he claims a right to do.

Concurring in the result, Judge Bryson called the Federal Circuit ruling "a sweeping change," and said, "I see no practical stopping point short of allowing declaratory judgment actions in virtually any case in which the recipient of an invitation to take a patent license elects to dispute the need for a license . . . ."

Obviousness

Leapfrog Enterprises, Inc. v. Fisher-Price, Inc. and Mattel, Inc.

**Parties:**

Plaintiff-Appellant: Leapfrog, owner of a patent directed to a learning device to help children read phonetically.

Defendants-Appellees: Fisher-Price and Mattel, accused of marketing an infringing PowerTouch device

**Facts:**

Asserted claim 25:

An interactive learning device, comprising:  
a housing including a plurality of switches;  
a sound production device in communication with the switches and including **a processor and a memory**;  
at least one depiction of a sequence of letters, each letter being associable with a switch; and  
a reader configured to communicate the identity of the depiction to **the processor**,  
wherein selection of a depicted letter activates an associated switch to communicate with the processor, causing the sound production device to generate **a signal** corresponding to a sound associated with the selected letter, the sound being determined by a position of the letter in the sequence of letters.

The bolded and underlined text evince a device that employs modern electronics/computer technology.

**Procedure:**

Leapfrog asserted claim 25 against Fisher-Price and Mattel. After jury deadlock, the trial court decided that (1) the defendants did not infringe, and (2) the claim is invalid in view of the prior art.

**Issue (obviousness only):**

Did the district court engage in improper hindsight in finding claim 25 obvious in view of the prior art?

**Holding:**

No, the district court properly found the claim invalid in view of the prior art and the knowledge of one of ordinary skill in the art.

**Analysis:**

Federal Circuit relied on the recently issued KSR case:

An obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not. See KSR Int'l Co. v. Teleflex Inc., 550 U.S. \_\_\_, 2007 WL 1237837, at \*12 (2007) ("The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.").

Market forces may make certain combinations obvious:

Accommodating a prior art mechanical device that accomplishes that goal to modern electronics would have been reasonably obvious to one of ordinary skill in designing children's learning devices. Applying modern electronics to older mechanical devices has been commonplace in recent years.

Prior art:

(1) Bevan patent '748, directed to an electro-mechanical learning toy in which the user placed uniquely shaped puzzle pieces for each letter into corresponding openings in a housing. Depressing the puzzle pieces causes a phonograph to operate, which plays a sound corresponding to the piece, i.e., the sound made is the sound of the letter. The device described in the patent relies on an electric motor and a mechanical structure.

(2) Texas Instruments Super Speak and Read device, a more modern device that relies on electronics.

Obviousness analysis: The Bevan device operates in a similar way to the claimed device and the TI SSR shows that in this field, the trend is toward updated such devices using modern electronics. According, the district court

did not err in concluding that claim 25 is merely an obvious modernization of the Bevan device.

"The combination is thus the adaptation of an old idea or invention (Bevan) using newer technology that is commonly available and understood in the art (the SSR)."

Takeda Chemical Industries, Ltd. v. Alphapharm Pty, Ltd.  
and Genpharm, Inc.

**Parties:**

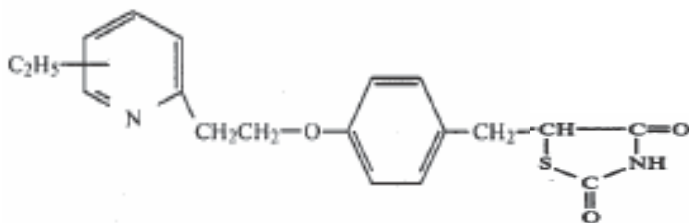
Plaintiffs-Appellees: Takeda, owner of US 4,687,777,  
directed to a drug used in the treatment of diabetes

Defendants-Appellants: Alphapharm and Genpharm, filers of  
an abbreviated new drug application for a generic version  
of the drug, which asserted that the '777 patent is invalid

**Facts:**

Claim 1 of the '777 is directed to a class of TZD  
compounds that are used in treating diabetes:

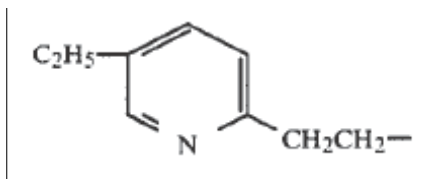
1. A compound of the formula:



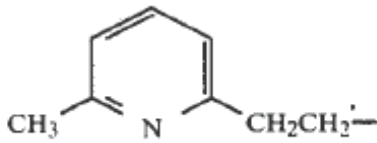
or a pharmacologically acceptable salt thereof.

Note the pyridyl ring on the left hand side of the  
compound. The ethyl substituent is pictorially drawn to  
the center of the ring, such that the ethyl substituent may  
be located on any one of the four carbons available for  
bonding.

Claim 2 covers the structure wherein the ethyl is located  
on the pyridyl ring as shown:



In the asserted prior art patent, a TZD compound (referred  
to as "compound b" is disclosed wherein a methyl is located  
on the pyridyl ring as shown:



**Procedure:**

Alphapharm and Genpharm filed an abbreviated new drug application for a generic version of the drug and asserted that the '777 patent is invalid on the basis of the above shown structure.

Takeda sued, alleging infringement of their '777 patent.

District court held a bench trial on issues of validity and enforceability, and concluded that Alphapharm failed to prove obviousness by clear and convincing evidence.

Alphapharm appealed.

**Issue:**

Is the class of TZD compounds obvious in view of the structurally similar compounds known in the prior art at the time the invention was made?

**Holding:**

No.

**Analysis:**

Controlling law on structurally similar compounds:

We have held that "structural similarity between claimed and prior art subject matter, proved by combining references or otherwise, where the prior art gives reason or motivation to make the claimed compositions, creates a prima facie case of obviousness." Dillon, 919 F.2d at 692. In addition to structural similarity between the compounds, a prima facie case of obviousness also requires a showing of "adequate support in the prior art" for the change in structure. In re Grabiak, 769 F.2d 729, 731-32 (Fed. Cir. 1985).

In this context, there must be some suggestion in the prior art to make the modification:

in order to find a prima facie case of unpatentability in such instances, a showing that the "prior art would have suggested making the specific molecular modifications necessary to achieve the claimed invention" was also required. Id. (citing In re Jones, 958 F.2d 347 (Fed. Cir. 1992); Dillon, 919 F.2d 688; Grabiak, 769 F.2d 729; In re Lalu, 747 F.2d 703 (Fed. Cir. 1984)).

The above test is consistent with the legal principles enunciated in KSR: "the Court acknowledged the importance of identifying "a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does" in an obviousness determination. KSR, 127 S. Ct. at 1731."

In this case, the record shows that the ordinarily skilled person would not have found any reason to select compound b for further study, to modify the compound by changing the methyl group to an ethyl group, and to further modify the compound by moving the ethyl substituent on the pyridyl ring.

The prior art Sodha II reference relied upon stated that the compound b was known to cause "considerable increases in body weight and brown fat weight." Therefore, "any suggestion to select compound b was essentially negated by the disclosure of the Sodha II reference."

Aventis Pharma Deutschland GmbH and King Pharmaceuticals, Inc. v. Lupin, Ltd. and Lupin Pharmaceuticals, Inc.

**Parties:**

Plaintiffs-Appellants: Aventis Pharma, owner of patents (US 5,061,722) covering ramipril, a blood pressure medication

King Pharmaceuticals, markets ramipril as a blood pressure medication under the name Altace®

Defendants-Appellant: Lupin, filer of an abbreviated new drug application for a generic version of ramipril

**Facts:**

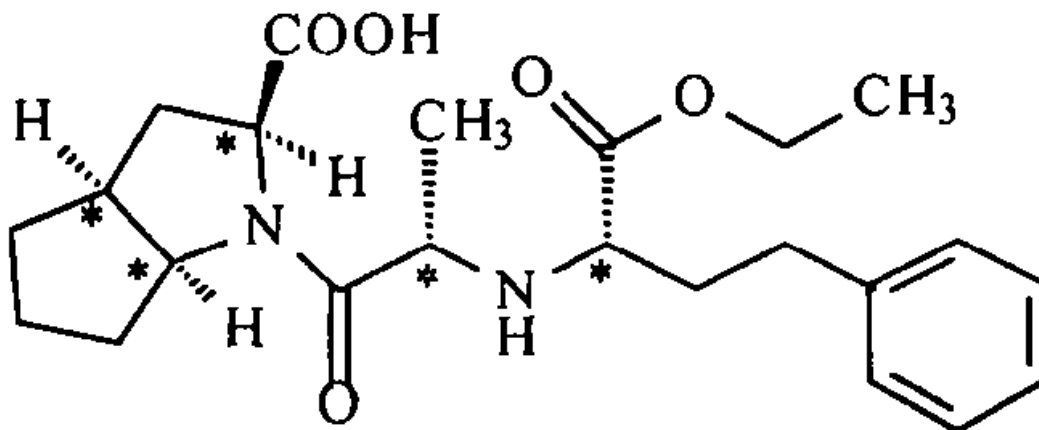
October 1981, Aventis' lead research synthesizes 5(S)-ramipril

November 5, 1981, Aventis filed German patent application covering 5(S)-ramipril.

November 3, 1982, Aventis files US analogue.

January 1991, FDA grants Aventis approval to market ramipril.

October 1991, US 5,061,722 issues, claiming 5(S)-ramipril "being substantially free of other isomers." The structure is below:



The isomer above is the 5(S) isomer. (Since there are 5 chiral centers, there are  $2^5$  or 32 different isomers, e.g., SSSSS, RSSSS, RRSSS, RRRRR, etc.)

Development of Ramipril and the Content of the prior art:

1. 1960s, the earliest angiotensin-converting enzyme inhibitor (ACE inhibitor) was the compound BPP<sub>5a</sub>, isolated from the venom of the Brazilian Viper. The venom was known to lower blood pressure, which motivated the search for the active compound. BPP<sub>5a</sub> has 6 chiral centers, all of which are in the S configuration.

2. Captopril was the first synthetic ACE inhibitor, having 2 chiral centers, both of which are in the S configuration.

3. Merck developed enalapril in 1980, which was ramipril's immediate predecessor. Enalapril has 3 chiral centers, all of which are in the S configuration.

4. Aventis and its competitor Schering worked simultaneously to develop new ACE inhibitors based on enalapril:

October 23, 1980 -- Schering files an application directed to the general ramipril structure, from which US 4,587,258 and 5,348,944 issue. These patents do not disclose how the chiral centers should be configured.

Example 20 in the specification of the '944 describes how to make a mixture of 4 isomers, one of which is the 5(S) form.

February 1981, Schering's lead researcher synthesized a mixture (the SCH 31925 mixture) of ramipril containing the SSSSS and SSSSR isomers, which became the subject matter of the '258 patent.

May 1986, Schering's '258 patent issued.

January 27, 2005, Schering's '258 patent expired.

**Procedure:**

In light of the expiration of Schering's '258, Lupin filed an ANDA seeking approval to market a generic version of ramipril.

Aventis sued Lupin for literal infringement and under DOE.

District court declined to grant summary judgment on the issue of literal infringement, finding disputed issues of material fact as to whether Lupin's formulation was substantially free of other isomers.

District court held bench trial on validity, concluding that the claims are not invalid, but the District court did so reluctantly, noting that if the standard were preponderance and not clear and convincing, the court would have concluded that the claims were obvious.

Both sides appealed.

**Issue:**

Is the 5(S)-ramipril structure obvious in view of the mixtures containing such structure known to the prior art at the time the invention was made?

**Holding:**

Yes.

**Analysis:**

**1. Rejection of the TSM test:**

The district court upheld the validity of the claims based on the absence of a clear and convincing showing of motivation to isolate/purify the 5(S)-isomer.

In the interim, the Supreme Court decided KSR, which counsels against applying the "teaching, suggestion, or motivation" ("TSM") test as a "rigid and mandatory formula[]." "

In this case, requiring an explicit teaching to purify the 5(S) isomer from a mixture "is precisely the sort of rigid application of the TSM test that was criticized in KSR."

**2. Still must show a reason:**

"It remains necessary to show "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness," but such reasoning "need not seek out precise teachings directed to the specific subject

matter of the challenged claim." See id. (quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006))."

In the context of claims directed to a compound that is purified/isolated from a mixture that existed in the prior art:

--In some case, the purified compound may not be obvious:

for example, it may not be known that the purified compound is present in or an active ingredient of the mixture, or the state of the art may be such that discovering how to perform the purification is an invention of patentable weight in itself.

--In others, the purified compound is prima facie obvious:

if it is known that some desirable property of a mixture derives in whole or in part from a particular one of its components, or if the prior art would provide a person of ordinary skill in the art with reason to believe that this is so, the purified compound is prima facie obvious over the mixture even without an explicit teaching that the ingredient should be concentrated or purified.

--In either case, obviousness may be rebutted by a showing of unexpected results:

See In re May, 574 F.2d 1082, 1090-94 (C.C.P.A. 1978) (holding isolated stereoisomer nonobvious over racemic mixture of stereoisomers, after conceded prima facie showing of obviousness, because isolated stereoisomer was unexpectedly nonaddictive); In re Adamson, 275 F.2d 952, 954-55 (C.C.P.A. 1960) (holding isolated stereoisomer obvious over racemic mixture of stereoisomers, given insufficient showing of any unexpected result)

In this case:

1. The record showed that Schering's lead researcher knew that the therapeutically active compound in the SCH 31925 mixture (containing the 5(S) and SSSSR isomers) was the 5(S) isomer.
2. Even if she did not, the prior art provides a reason to conclude that the 5(S) isomer is the potent isomer: in the

known ACE inhibitors (enalapril, captopril, and BPP5a), the structures in which all chiral centers had the S configurations were all known to be more potent than structures containing 1 or more chiral centers in the R configuration.

Accordingly, the purified isomer is prima facie obvious since it was already known to be the active compound or the ordinarily skilled person would have easily been able to conclude that the all S isomer was the active compound since in all predecessor compounds, the all S isomers were the active compounds.

Aventis attempted to show unexpected results, but its results compared 5(S) to the RRSSS isomer, but Schering's mixture did not contain the RRSSS isomer, so the comparison is not meaningful.

**In re Translogic Technology, Inc.**

**Parties:**

Plaintiff-Appellant: Translogic Technology, Inc., owner of patent entitled "Transmission Gate Series Multiplexer" (US Patent No. [5,162,666](#))

Defendant-Appellee: USPTO

**Facts:**

- March 15, 1991: Translogic files application entitled "Transmission Gate Series Multiplexer" (TSM)
- November 10, 1992: TSM application issues as the '666 patent

**Procedure:**

**A. DIST CT PROCEEDING: Infringement & validity litigation involving '666 patent**

- March 1999: Translogic initiated an infringement litigation against alleged infringer Hitachi Ltd. in Oregon Dist Ct
- October 2003: Jury upheld the validity of '666 patent.
- May 2005: Following a finding of induced infringement, Translogic received an \$86.5 million jury award for patent infringement damages and the court entered a permanent injunction. Final judgment entered against Hitachi after post-trial briefing.

**B. USPTO BOARD PROCEEDING: Reexamination of '666 patent**

- June 1999-Sept 2002: After original filing of the district court litigation, Hitachi filed five third party requests for re-examination of the '666 patent.
- March 2004: The requests were merged into a single reexamination proceeding in which the USPTO rejected a critical portion (claims 16, 17, 39-45, 47, and 48) of the

'666 patent on the grounds that the claims would have been obvious at the time of invention.

- July 2005: In response to Translogic's appeal of the reexamination decision, the PTO affirmed its rejection of the '666 patent.

### **C. APPEALS TO FEDERAL CIRCUIT**

- Translogic appeals Board's decision to Federal Circuit
- Hitachi files interlocutory appeal re Dist Ct proceeding; Federal Circuit stayed permanent injunction
- Hitachi appeals Dist Ct's final judgment
- Fed Cir consolidated reexam appeal, interlocutory appeal, and final judgment appeal. *The present opinion only addresses the reexam appeal*

#### **Issue:**

Was the multiplexer circuit claimed in '666 patent obvious at the time it was invented?

#### **Holding:**

Yes.

#### **Analysis:**

### **A. BASICS OF A MULTIPLEXER**

- A multiplexer is a type of electrical circuit having multiple inputs, one or more control lines, and one output. The signals on the control lines select one of the various inputs to be passed to the output. In a 2:1 multiplexer, a single output value is selected from two inputs. Thus, the invention selects one of the multiple inputs to pass to the output.

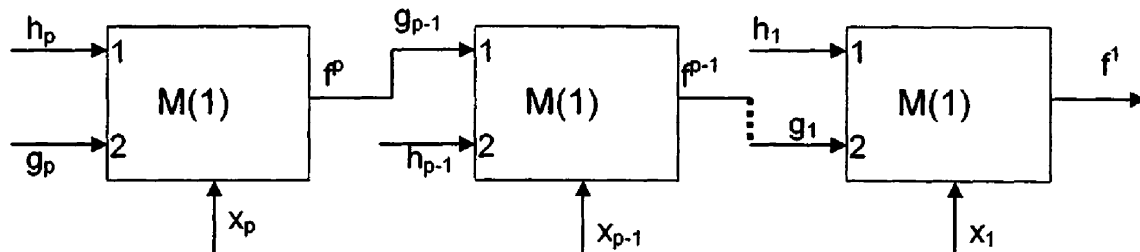
### **B. MULTIPLEXER CIRCUIT OF THE '666 PATENT**

- The '666 patent describes a multiplexer that couples together multiple stages of 2:1 multiplexers in series. The '666 patent specifically uses a transmission gate multiplexer ("TGM") as each 2:1 multiplexer.

- During the reexamination, Translogic agreed that all of the claims on appeal stood or fell with claims 47 and 48.
- Claim 47 covers a multiplexer circuit that couples together three TGMs to form a 4:1 multiplexer.
- Specifically, the multiplexer circuit has four input lines which are coupled to receive input variables and three control lines coupled to receive control signals.
- Claim 48 similarly covers a multiplexer circuit that couples together four TGMs to form a 5:1 multiplexer.

### C. CITED PRIOR ART

- The Board found that Fig. 3 (see below) of Gorai (Gorai, R.K., and Pal, A., *Automated synthesis of combinational circuits by cascade networks of multiplexers*, IEE Proc., Vol. 137, Pt. E, No. 2, March 1990, pages 164-170) discloses a three-stage multiplexer circuit with four inputs ( $h_p, g_p, h_{p-1}, h_1$ ) and three control inputs ( $x_p, x_{p-1}$  and  $x_1$ ).



- The Board found that Gorai does not disclose use of TGMs for each multiplexer stage (i.e.,  $M(1)$ ) in Fig. 3.
- The Board, however, found that Weste (Weste, Neil H.E., and Eshraghian, Kamran, *Principles of CMOS VLSI Design: A Systems Perspective* (Addison-Wesley Publ. Co.1985), pages 14-17 and 172-175) taught a 2:1 TGM circuit to transfer a logic 0 or a logic 1 between the input and output.

### D. OBVIOUSNESS STANDARD

- An invention is unpatentable as obvious if the differences between the patented subject matter and the

prior art would have been obvious at the time of invention to a person of ordinary skill in the art. In re Gartside, 203 F.3d 1305, 1319 (Fed.Cir.2000).

- Obvious variants of prior art references are themselves part of the public domain. Teleflex, Inc. v. KSR Int'l, Co., 119 Fed.Appx. 282, 288 (Fed.Cir.2005).
- Obvious variants of teachings of a reference are relevant prior art, even if the reference addressed a different problem because common sense teaches that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle. KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727 at 1742, 167 L.Ed.2d 705 (2007).

#### **E. ANALYSIS OF TRANSLOGIC'S ARGUMENTS**

1. Translogic contends that neither the Gorai algorithm nor its circuit realizations provide a multiplexer function since the entire point of Gorai's article revolves around logic, not multiplexing.

- Translogic mistakenly argues that variants of a circuit connecting 2:1 multiplexers in series are not relevant prior art with respect to the 666 patent because these variants do not address the same problem, namely an improved multiplexer circuit. However, this argument overlooks the fundamental proposition that the series circuits in Gorai are prior art within the public domain and the common knowledge of a person of ordinary skill in the art. Thus, the Gorai reference is a relevant prior art reference with respect to the 666 patent and clearly discloses a series 2:1 multiplexer circuit.

2. Translogic contends that Fig. 3 in Gorai is a half-bare, incomplete circuit because all h and g inputs are undefined (variables or constants) and therefore the Fig. 3 circuit only shows three control lines (x1, xp-1 and xp) and thus cannot be a multiplexer.

- As any person of ordinary skill in the art would understand, the inputs to a circuit do not change the

circuit itself. Therefore, Gorai discloses a series multiplexer circuit as claimed in the 666 patent.

3. Translogic contends that Gorai does not teach or suggest the use of TGMs for each M(1) stage (i.e., 2:1 multiplexer). Translogic admits that the Weste reference does disclose a TGM circuit; however, Translogic argues that Weste provides no specific teaching, suggestion or motivation to use TGMs in a series circuit such as shown in Gorai Fig. 3.

- In looking for a multiplexer circuit for the individual 2:1 multiplexers disclosed in Gorai, a person of ordinary skill in the art would have solved this design need by "pursu[ing] known options within his or her technical grasp." KSR Int'l Co. at 1742. TGMs were well-known multiplexer circuits as evidenced by the Weste 1985 textbook.

## Case Law on Willfulness

In Re Seagate Technology, LLC

### **Parties:**

Plaintiff: Convolve, Inc. and MIT, patent owners

Defendant: Seagate Technology, Mandamus petitioner

### **Facts:**

Prior to July 13, 2000, Seagate retained attorney Gerald Sekimura to provide an opinion regarding Convolve's patents.

July 13, 2000, Convolve sues Seagate, alleging infringement of two patents, '635 and '267.

July 24, 2000, Seagate receives Sekimura's opinion re invalidity/non-infringement of '635 and '267 patents.

December 29, 2000, Sekimura sends updated opinion, concluding that '267 is unenforceable.

January 25, 2002, Convolve amends complaint, alleging infringement of recently issued '473 patent.

February 21, 2003, Seagate receives 3rd opinion from Sekimura re invalidity/noninfringement of '473 patent.

Seagate's opinion counsel, Sekimura, and Seagate's trial counsel operated independently at all times.

### **Procedure:**

--Convolve sued Seagate, alleging infringement of three patents in SDNY.

--In 2003, Seagate notified Convolve of its intent to rely on Sekimura's opinions in defending against willful infringement, disclosed Sekimura's work product, and made Sekimura available for deposition.

--Convolve moved to compel discovery of any communications and work product of Seagate's trial counsel.

--Trial court concluded that Seagate waived attorney client privilege for all communications between it and any counsel concerning the subject matter of Sekimura's opinions, and Convolve sought production of trial counsel opinions and notice deposition of Seagate's trial counsel.

--After trial court denied Seagate's motion for a stay and certification of interlocutory appeal, Seagate petitioned for a writ of mandamus.

--Federal Circuit stayed discovery orders and ordered en banc review of the petition.

**Issue:**

En banc order set out the following three questions:

1. Should a party's assertion of the advice of counsel defense to willful infringement extend waiver of the attorney-client privilege to communications with that party's trial counsel? See In re EchoStar Commc'n Corp., 448 F.3d 1294 (Fed. Cir. 2006).

2. What is the effect of any such waiver on work-product immunity?

3. Given the impact of the statutory duty of care standard announced in Underwater Devices, Inc. v. Morrison-Knudsen Co., 717 F.2d 1380 (Fed. Cir. 1983), on the issue of waiver of attorney-client privilege, should this court reconsider the decision in Underwater Devices and the duty of care standard itself?

**Holding on Question 1:**

No, the significantly different functions of trial counsel and opinion counsel advise against extending waiver to trial counsel.

**Holding on Question 2:**

Although an advice of counsel defense asserted to refute a charge of willful infringement may also implicate waiver of work product protection, the waiver does not extend to trial counsel's work product, absent exceptional circumstances.

**Holding on Question 3:**

The standard of due care as set out in Underwater Devices is overruled, and the affirmative duty of due care is abandoned:

"[P]roof of willful infringement permitting enhanced damages requires at least a showing of objective recklessness. ... "[t]he civil law generally calls a person reckless who acts ... in the face of an unjustifiably high

risk of harm that is either known or so obvious that it should be known." ... Accordingly, to establish willful infringement, a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent."

"If this threshold objective standard is satisfied, the patentee must also demonstrate that this objectively-defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer. We leave it to future cases to further develop the application of this standard."

**Analysis:**

A. Development of the standard for evaluating willful infringement up to the Seagate opinion:

--Beatrice Foods Co. v. New England Printing and Lithographing Co., even though the statute does not require a finding of willfulness in awarding treble damages, the Federal Circuit held in this case that enhanced damages requires a showing of willful infringement. [Judge Gajarsa, in concurrence, states the proof of willfulness should not be a requirement and that district courts should have the discretion to enhance damages if the facts of the case indicate that the patentee is not adequately compensated by statutory damages]

--Underwater Devices Inc. v. Morrison-Knudsen Co. (Fed. Cir. 1983), articulated a standard of willfulness: "Where a potential infringer has actual notice of another's patent rights, he has an affirmative duty to exercise due care to determine whether or not he is infringing. Such an affirmative duty includes, inter alia, the duty to seek and obtain competent legal advice from counsel before the initiation of any possible infringing activity." The standard is low because, at the time the standard was articulated, "widespread disregard of patent rights was undermining the national innovation incentive"

--The affirmative duty caused accused infringers to assert an advice of counsel defense. In Kloster Speedsteel AB v. Crucible Inc., the Federal Circuit held that failure to produce advice from counsel "would warrant the conclusion that it either obtained no advice of counsel or did so and

was advised that its [activities] would be an infringement of valid U.S. Patents." That is, failure to produce an opinion warrants an adverse inference of willfulness.

--The Federal Circuit, in *Knorr Bremse Systeme Fuer Nutzfahreuge GmbH v. Dana Corp.*, recognized that the adverse inference imposed inappropriate burdens on the attorney-client relationship and held that invoking the attorney-client-privilege or work product protection does not give rise to adverse inference and that infringer's failure to obtain legal advice does not give rise to an adverse inference with respect to willfulness.

--In *re Echostar Communications Corp.* addressed the scope of waiver resulting from advice of counsel defense: (1) relying on in-house counsel's advice triggers waiver of attorney-client privilege, and (2) asserting the advice of counsel defense waives work product protection and the attorney-client privilege for all communications and documents on the same subject matter. *Echostar* was silent on extending the waiver to cover advice of counsel defense as it relates to trial counsel.

#### B. Justifying the new recklessness standard for proving Willful Infringement

--Copyright: Appellate Courts have consistently applied a recklessness standard to copyright infringement [And, Judge Gajarsa points out, in concurrence, the copyright statute requires a finding of willfulness for enhanced damages]

--Civil Liability: *Safeco Ins. Co. of Am. v. Burr* (S.Ct. 2007), imposing a recklessness standard for recovering punitive damages in construing a statute that allows for punitive damages for willful behavior.

--Underwater Devices set a lower standard for willfulness in comparison that is more akin to negligence, so the Federal Circuit overrules the negligence standard therein so that the willfulness standard in patent infringement is comparable to willfulness standards in other areas of civil liability.

#### C. Rationale for limiting scope of waivers of Attorney-Client Privilege and Work Product Immunity to apply to communications relating to the advice of counsel defense and not to communications with trial counsel

#### Attorney Client Privilege

--The broad scope of waiver with regard to the advice of counsel defense prohibits the infringer from using advice of counsel as both a sword and a shield: "it prevents the inequitable result of a party disclosing favorable communications while asserting the privilege as to less favorable ones."

--The functions of trial counsel and opinion counsel are significantly different. "Whereas opinion counsel serves to provide an objective assessment for making informed business decisions, trial counsel focuses on litigation strategy and evaluates the most successful manner of presenting a case to a judicial decision maker. And trial counsel is engaged in an adversarial process. ... Therefore, fairness counsels against disclosing trial counsel's communications on an entire subject matter in response to an accused infringer's reliance on opinion counsel's opinion to refute a willfulness allegation."

#### Work Product Protection

--Same rationale as above, with exception that under some circumstances, work product may be discoverable

--Federal Circuit applies standard applicable to civil cases, "work product protection is qualified and may be overcome by need and undue hardship. Fed. R. Civ. Pro. 26(b)(3). However, the level of need and hardship required for discovery depends on whether the work product is factual, or the result of mental processes such as plans, strategies, tactics, and impressions, whether memorialized in writing or not. Whereas factual work product can be discovered solely upon a showing of substantial need and undue hardship, mental process work product is afforded even greater, nearly absolute, protection."

## Prosecution History Disclaimer

Hakim v. Cannon Avent Group, PLC; Cannon Rubber Limited, Avent America

### **Parties**

Plaintiff: Hakim, owner of patents related to sealing mechanisms in drinking cups, e.g., child spill proof cups

Defendant: Manufacturer's of leak resistant drinking cups

### **Facts:**

During prosecution of the parent application ('931), Hakim argued that the distinction of its claimed cup over the prior art is the use of a flexible valve material which has a slit.

The defendant's accused cup employs a flexible diaphragm having a hole.

Hakim filed a continuation application, having the claim:

1. An apparatus for use in a no-spill drinking cup, said apparatus comprising:  
a valve holder, such valve holder comprising at least one valve and a blocking element, said valve comprising a flexible material, said blocking element comprising an area of material which is impenetrable to the flow of liquid, said valve further comprising an opening through said flexible material,

Along with the filing papers, Hakim included a letter stating that the continuation claim was broader since it required an opening, and not a slit, as required in the parent application.

The claims of the continuation application were allowed without comment.

### **Procedure:**

Hakim asserted the claims of the continuation application against Cannon. The district court found no infringement, since the claims of the continuation application were limited by the disclaimer in the parent: "Because Hakim did not retract any of his original arguments

distinguishing the prior art, he is held to the restrictive claim construction he argued during prosecution of the patent."

Hakim appealed.

**Issue:**

Does a disclaimer in a parent application limit the scope of claims in a continuation application?

**Holding:**

"Although a disclaimer made during prosecution can be rescinded, permitting recapture of the disclaimed scope, the prosecution history must be sufficiently clear to inform the examiner that the previous disclaimer, and the prior art...may need to be re-visited."

Case Summary on Doctrine of Equivalents/Ongoing royalties  
Paice LLC v. Toyota Motor Corporation.

**Parties**

Plaintiff: Paice LLC, owner of patents related to drive trains for hybrid electric vehicles

Defendant: Toyota, manufacturer of electric vehicles

**Facts**

Paice's patent claims cover a drive train for use in a hybrid vehicle, illustrated below:

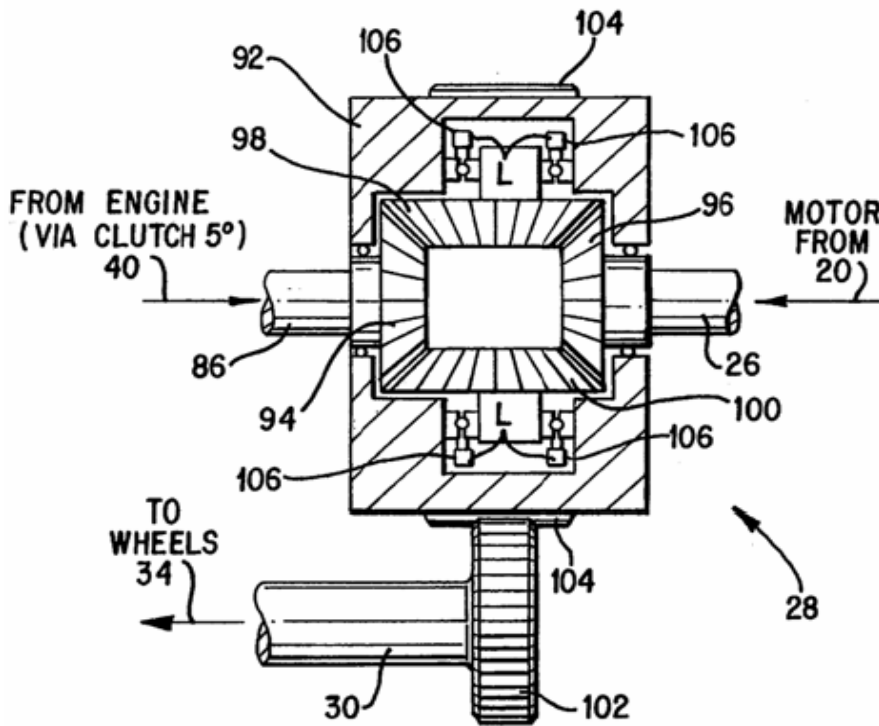


FIG. 11

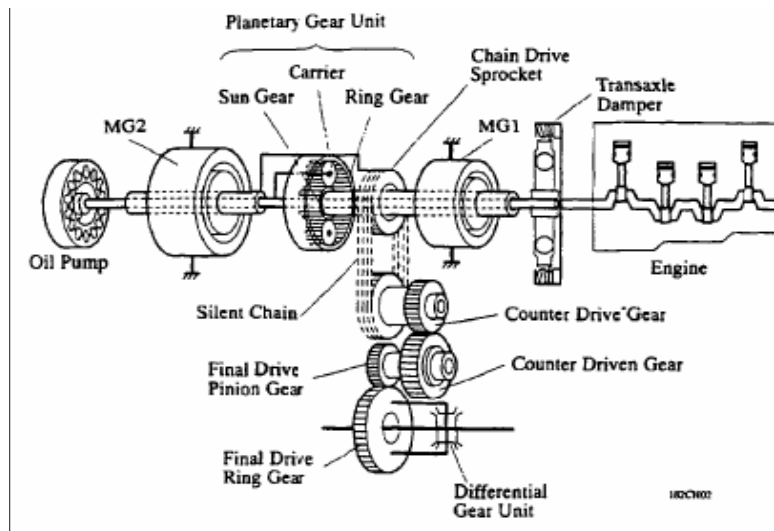
In this figure, output shaft 86 from the internal combustion engine and output shaft 26 from the electric motor extend into controllable torque transfer unit 92 (abbreviated CTTU, this is the claim term at issue under literal infringement and doctrine of infringement analysis). Output shaft 86 and output shaft 26 terminate at bevel gears 94 and 96, respectively each of which mesh

with bevel gears 98 and 100. Bevel gears 98 and 100 are equipped with microprocessors 106, which set the rotational freedom of the gear with respect to the housing 92. When the microprocessor locks the gears, housing 92 rotates, which causes the drive shaft 30 to rotate. Output shafts 86 and 26 rotate at the same speed, although the amount of torque provided by each may differ – the amounts of torque are controlled by the microprocessor.

In another mode of operation, the internal combustion engine may be disengaged, the bevel gears 98 and 100 are locked, and there is a 1 to 1 transfer of torque from the electric motor.

In yet another mode of operation, the ICE is disengaged, the bevel gears are free to rotate, and there is a 1 to 2 transfer of torque from the electric motor output shaft.

Toyota's accused device:



In Toyota's device, the output shaft from the internal combustion engine is connected to the Planetary Carrier, while the output shaft from the electric motor, MG2, is connected to the ring gear. As with the claimed invention, Toyota's device comprises a microprocessor that controls the amount of torque provided by both the ICE and MG2.

### Procedure

Paice initiated the lawsuit in E.D.Tx. alleging literal infringement and infringement under the doctrine of

equivalents. The jury found that Toyota's drive train lacks a literal CTTU, but the drive train infringes under the doctrine of equivalents. The jury awarded \$4,269,950 in damages to Paice, which worked out to about \$25 per vehicle sold.

Toyota filed a motion for judgment as a matter of law, seeking to overturn the jury's finding of infringement. Paice filed its own JMOL motion, seeking to overturn the jury's finding of no literal infringement.

Paice also filed a motion for a permanent injunction. In lieu of a permanent injunction, the District Court ordered on ongoing royalty to be paid by Toyota to Paice of about \$25 per vehicle sold.

Both sides appealed.

### **Issue**

1. Was the evidence sufficient to support a finding of infringement under the doctrine of equivalents?
2. Did the district court have the authority to order an ongoing royalty?

### **Holding**

1. Yes, the evidence supported the jury's finding.
2. Although an order of an ongoing royalty in lieu of a permanent injunction may be appropriate, a district court must provide a rationale why the chosen rate is appropriate so that the appellate court may properly determine if the ongoing royalty order is not an abuse of discretion.

### **Analysis**

Toyota argued that the finding of infringement under DOE must be overturned for 3 reasons:

1. The evidence was insufficient since the expert witness testified only briefly on the issue of DOE. The Fed. Cir. Disagreed, finding that many of the issues pertaining to literal infringement carry over to DOE, and that the record of the expert witness's testimony was particularized to the DOE and contained sufficient linking argument with respect to the function, way, result test.
2. Paice criticized hybrid drive trains that were described in two prior art patents, and Toyota argued that their drive trains were so similar to the drive

trains in the prior art, that Paice effectively disavowed coverage of Toyota's drive trains. The rule of *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.* controls here. In that case, there were two types of balloon catheters, the dual lumen configuration and the coaxial lumen configuration. In the patent description, the patentee had distinguished the dual lumens and coaxial lumens to such an extent that the claims should not be read broadly to cover the purportedly inferior dual lumens configuration. In this case, the court held that where there are two known configurations, and all embodiments encompass one configuration, DOE cannot be extended to cover the other configuration. This case differs since Paice did not choose one configuration for all embodiments or so tout the invention's improvements over the very same subject matter sought to be captured under DOE. For example, Paice's criticisms of the prior art drive trains pertained to a complicated, human operated control system, whereas both Paice's and Toyota's control systems were operated by a microprocessor.

3. Admissions by counsel. Toyota had developed Prius technology, such that there were two models, Prius I and Prius II. Paice's counsel admitted that Prius I was not covered by the patent, but this admission does not pertain to the infringing Prius II model.

## Case Summaries on Statutory Subject Matter

In re Petrus ACM Nuijten

### **Parties**

Plaintiff: Patent Applicant Nuijten, application is directed to a technique for reducing distortion induced by the introduction of watermarks into signals.

Defendant: PTO and Board of Patent Appeals and Interferences

### **Facts**

Nuijten's application is directed to a method for reducing the distortion in, for example, an audio file caused by the introduction of a watermark. A watermark is data that a copyright owner will embed in the digital audio file to protect against unauthorized copying. The additional data, however, may cause a slight distortion in the sound when the digital audio file is played. Nuijten solved the problem by modifying the watermarked signal in a manner that compensates for (and decreases) the distortion introduced by the watermark.

Nuijten's application contains claims directed to:

1. a method of embedding supplemental data in a signal. This claim was allowed and is not appealed.
11. an arrangement for embedding supplemental data in a signal. This claim was allowed and is not appealed.
15. a storage medium having stored thereon a signal with embedded supplemental data. This claim was allowed and is not appealed.

Claim subject to appeal is claim 14 directed to "a signal with embedded supplemental data,..."

### **Procedure**

Appeal from the decision of the BPAI of claims directed to a signal that has been encoded in a particular manner. The Examiner rejected claim 14 under Section 101 as being directed to nonstatutory subject matter, which was affirmed by BPAI.

Analysis by the Board:

1. "the signal has no physical attributes and merely describes the abstract characteristics of the signal and,

thus, it is considered an abstract idea unpatentable under Diamond v. Diehr."

2. a signal does not fall into any of the four statutory categories of patentable subject matter:

1. Not a process since the claim does not recite acts
2. Not a machine since the signal has no concrete tangible physical structure
3. Not a composition of matter since the signal has no matter
4. Not a manufacture since the signal does not have any physical structure or substance

### **Issue**

Are transitory and electromagnetic signals propagating through a medium, such as wires, air, or a vacuum patentable subject matter under Section 101?

### **Holding**

No

### **Analysis**

Whether a patent is invalid for failure to claim statutory subject matter under section 101 is a matter of both claim construction and statutory construction.

Claim Construction:

The only limitations in claim 14 are directed to the signal's information content. Since the claim lacks any limitations directed to a physical, tangible means of carrying the signal, the claim itself is directed to a transitory, propagating signal.

Statutory Construction:

The issue is then whether a transitory, propagating signal falls within any of the four statutory categories.

Nuitjen protested this narrow analysis, citing language in State Street Bank & Trust Co. v Signature Financial group, which stated "the question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to...but rather on the essential characteristics of the subject matter, in particular, its practical utility."

Federal Circuit rejected this statement, asserting that it was not the State Street's holding, and stating that State Street recognized that "subject matter must fall into at

least one category of statutory subject matter." Thus, it is not critical that an applicant pigeon hole with category, just that the subject matter can reasonably fall into any category.

The Federal Circuit analyzed each statutory category and found that the signal does not fall into any category:

1. Process: to be a process, a claim must recite acts or a series of acts. While Nuijten argues that the claim requires the signal to be "encoded" this recitation may make the claim a product-by-process claim, but product-by-process claims are directed to the product and not the process
2. Machine: to be a machine, the claim must be directed to a concrete thing, consisting of parts, or of certain devices and combination of devices. A transitory signal made of electrical or electromagnetic variances is not made of parts or devices in any mechanical sense.
3. Manufacture: *Diamond v. Chakrabaty* defines manufacture as an article resulting from "the production of articles for use from raw or prepared materials by giving these materials new forms, qualities, properties, or combinations, whether by hand labor or by machinery." An electronic signal is not a manufacture since "in essence, energy embodying the claims signal is fleeting and is devoid of any semblance of permanence during transmission."
4. Composition of matter: not challenged on appeal, but this category includes "all compositions of two or more substances and all composite articles..."

In re Stephen W. Comiskey

**Parties**

Plaintiff: Patent Applicant Comisky, application is directed to a method and system for mandatory arbitration involving legal documents, such as wills or contracts.

Defendant: PTO and Board of Patent Appeals and Interferences

**Facts**

Comiskey's claim 1 recites a "method for mandatory arbitration resolution regarding one or more unilateral documents [= wills; or bilateral documents = contracts]"

**Procedure**

Examiner initially rejected the claims as being obvious in view of the prior art. Despite Comiskey's amendments, the Examiner maintained his rejections as obvious. Comiskey appealed, and the Board affirmed the rejections based on obviousness.

Comiskey appealed. After oral argument, the Federal Circuit requested supplemental briefing directed at the patentability of the subject matter under section 101. Comiskey argued in his brief that Fed. Cir. Lacked power to consider a ground of rejection not relied on below.

Federal Circuit disagrees and concludes that they may consider that the claims are barred as being directed to non-patentable subject matter, since the question of whether claims are invalid for failure to claim statutory subject matter...is a question of law which we review without deference."

**Issue**

Is a method of doing business involving a mental process for resolving a legal dispute that is not tied to any machine, manufacture, or composition patentable subject matter under Section 101?

**Holding**

No

**Analysis**

--Although business methods are seemingly within the category of process, a method of doing business was [before

State Street] rejected as not being within the statutory classes. State Street eliminated the "business method" exception to statutory subject matter. Comiskey's method claims may be considered a business method, but business methods are still subject to the statutory requirements of all other classes of subject matter.

--Section 101, although broad, still places restrictions on what may subject matter may be patentable subject matter. A process must be a process within the meaning of the patent act.

--Abstract ideas are not patentable. Two aspects may distinguish abstract ideas from otherwise patentable subject matter:

1. when an abstract concept has no claimed practical application, it is not patentable. An algorithm, for example, must produce a useful, concrete, and tangible result to be patentable.
2. the abstract must have practical application. The Supreme Court has held "a claim reciting an algorithm or abstract idea can state statutory subject matter only if, as employed in the process, it is embodied in, operates on, transforms, or otherwise involves another class of statutory subject matter, i.e., a machine, manufacture, or composition of matter." A claim that involves both a mental process and one of the other categories of statutory subject matter...may be patentable under section 101. Mental processes...standing alone are not patentable even if they have practical application.

--With regard to Comiskey's claims, they claim the mental process of resolving a legal dispute between two parties by the decision of a human arbitrator." Comiskey concedes that these claims do not require a machine, describe a process of manufacture, or a process for the alteration of a composition of matter. Since it is a mental process that does not otherwise involve another class of statutory subject matter.

## Case Summary on Liability for Divided Infringement

BMC Resources, Inc. v. Paymentech, L.P.

### Parties

Plaintiff: BMC Resources, owner of patents related to PIN-less debit bill payment (PDBP), demanded that Paymentech obtain a license under patents

Defendant: Paymentech, refused to obtain license and filed suit seeking declaratory judgment of invalidity

### Facts

Paymentech processes PDBP according to the following sequence:

1. customer calls merchant to pay bill using an interactive voice response unit
2. merchant collects payment information and sends it to Paymentech
3. Paymentech routes information to participating debit network
4. debit network forwards information to financial institution
5. financial institution authorizes transaction and charges customer account

Paymentech informs merchant who informs customer of the transaction status

Process covered by claim of BMC's patent 5,870,456

**[brackets indicate actor who performs action in Paymentech's process]:**

6. A method of paying bills using a telecommunications network line ... wherein a caller begins session using a telecommunications network line to initiate a spontaneous payment transaction to a payee, the method comprising the steps of:

prompting the caller to enter a payment number ...;  
**[merchant]**

prompting the caller to enter a payment amount ...;  
**[merchant]**

accessing a remote payment network associated with the entered payment number, **[Paymentech]**

the accessed remote payment network determining, during the session, whether sufficient available credit or

funds exist in an account associated with the entered payment number to complete the payment transaction, and **[debit network]**

upon a determination that sufficient available credit or funds exist in the associated account, **[debit network]**

charging the entered payment amount against the account associated with the entered payment number, **[financial institution]**

adding the entered payment amount to an account associated with the entered account number, and **[merchant]**

storing the account number, payment number and payment amount in a transaction file of the system.

7. The method of claim 6 wherein said payment number is a PIN-less credit or debit card number.

### **Procedure**

Appeal from district court's summary judgment decision that Paymentech is not liable for infringement since Paymentech does not perform all of the steps of the process claims at issue and does not direct or control the behavior of the other parties who performed the method steps that Paymentech did not perform.

### **Issue**

Is a single party liable for direct infringement of a claim when that party does not perform every step of the claim but is part of multiple parties who together perform every step of the claim?

### **Holding**

No, unless the patent owner can establish that the party who performs only part of the claim controls the other parties who together perform every step of the claim.

### **Analysis**

Both sides agree that Paymentech is only one party out of four who altogether perform every step of the claim. BMC, nevertheless, argued that *On Demand Machine Corp. v. Ingram Industries, Inc.* change the law governing joint infringement by multiple parties when the Federal Circuit stated that it found no flow in a jury instruction that

stated "it is not necessary for the acts that constitute infringement to be performed by one person or entity." The Federal Circuit agreed with the District Court's conclusion that this statement was dicta and did not change the law of joint infringement.

Instead, the Federal Circuit held that the law of joint infringement is not changed and concluded that one party, to be liable for infringement when another party performs some of the steps, must control that other party to be liable.

Finally, the Federal Circuit stated that BMC had the opportunity to draft the claims from the perspective of a single since, sinc between the public and the patent owner who had the opportunity to "negotiate broader claims but did not do so,...it is the patentee who must bear the cost of its failure to seek protection..."