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The Untold Story of the First Appeal to the Federal Circuit

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Introduction

For many years, George E. Hutchinson,¹ the first clerk of the Federal Circuit, told the story that on the first day of the court's existence, Friday, October 1, 1982, a young lawyer from Chicago showed up bright and early at his office and filed an emergency motion for a stay pending appeal—even before the judges of the court had been sworn in.

Just over thirty-two years after the oral argument in that first appeal, I became the last counsel of record who can give a first-person account of the oral argument and the case,² and therefore I take this opportunity to tell the story. This was appeal no. 83-500, *The Magnavox Co. v. Mattel, Inc.*,³ the first appeal from the district court filed in the Federal Circuit. The public knows

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¹ George E. Hutchinson is Of Counsel to Finnegan Henderson. When the Federal Circuit Bar Association was formed in 1985, he became the Executive Director and served until 2003. Mr. Hutchinson is currently the Secretary of the Federal Circuit Historical Society. *George E. Hutchinson*, FINNEGAN, <http://www.finnegan.com/georgehutchinson/> (last visited July 6, 2015).

² Counsel on appeal for appellants were Granger Cook, Jr. and myself, both of Cook, Wetzel and Egan. Ronald M. Goldman (Chief Patent Counsel of Mattel) was also listed as of counsel. (Hon.) Philip W. Tone of Jenner & Block appeared on Mattel's briefs but is not named on the court's docket sheet. James G. Hunter, Jr. of Latham & Watkins appeared as counsel on appeal for Sears, but he did not participate beyond the emergency motion for a stay. The docket sheet indicates that the original counsel for appellees was Theodore W. Anderson of Newman, Williams, Anderson and Olson. He was succeeded by D. Dennis Allegretti, with Charles G. Call and Mark T. Banner of counsel, all of Allegretti, Newitt, Witcoff & McAndrews, Ltd. Messrs. Hunter, Anderson, and Call neither appeared on the main briefs nor participated in oral argument. *See Magnavox Co. v. Mattel, Inc.*, 216 USPQ 28, 31 (N.D. Ill. 1982).

³ 216 USPQ 28 (N.D. Ill. 1982).

nothing about it because no opinion was released—the parties reached a settlement literally on the eve of an opinion being published.⁴

I. Appeal No. 83-500

Mattel appealed from the district court in Chicago, where the patent infringement case had been tried without a jury to the Hon. George N. Leighton.⁵ The issue was whether “means plus function” claims were infringed. The judge had verbally announced his decision in favor of plaintiffs from the bench and invited their counsel to submit proposed findings of fact and conclusions of law, which he adopted virtually unchanged.⁶ The district court also entered an injunction, and Mattel’s customer Sears was faced with having to remove the very popular Mattel INTELLIVISION® system from its shelves just as the holiday shopping season was beginning.

Mattel had the option of appealing to the Seventh Circuit before October 1, 1982 or waiting for the new court to come into existence and appeal to it. Mattel decided to use the Federal Circuit. The first order of business was to stay the injunction pending appeal. So, we prepared an emergency stay motion for Mattel, and Sears’ counsel also prepared one. However, we could not tender the papers to the Federal Circuit until a notice of appeal had been filed with the District Court. While it was not our objective to file the first appeal, it was clear that this was highly possible. However, since Chicago is one time zone behind Washington, D.C., we had to wait an hour for the NDIL clerk’s office to open before we could file the notice of appeal there. It was possible that someone in the Eastern Time zone, with a one-hour head start, would file an appeal ahead of us and present the first case. If anyone did, they did not show up at the Federal Circuit Clerk’s office that morning to docket the appeal that same day. In retrospect, since no one else was waiting at the Federal Circuit Clerk’s office, there was little danger that the first appeal number would be assigned to another case.

⁴ Of course the business of the merged courts continued in October 1982, and many opinions issued on previously-filed appeals. Many people remember *South Corp. v. United States*, 690 F.2d 1368 (Fed. Cir. 1982) as the first opinion. None of these cases, however, were appeals to the Federal Circuit from the district court.

⁵ Judge Leighton is nearly 103 years old and has a remarkable personal story. Despite amazing adversity, he graduated from Harvard Law School, practiced in Chicago, and became a trial court judge in Illinois. Then he became the first African-American judge of the Appellate Court of Illinois. In 1976, President Gerald Ford appointed him to the federal bench. He returned to private practice in 1987. See Amanda Roberts, *Profile: The Most Remarkable Lawyer or Judge I’ve Ever Met*, CHICAGO LAWYER (July 2, 2010), <http://www.chicagolawyer-magazine.com/Archives/2010/07/01/profile-07-2010.aspx>.

⁶ See *Magnavox Co.*, 216 USPQ at 31.

Just minutes after 10:00 a.m., with the filing of Mattel's notice of appeal in Chicago confirmed by telephone, I hurried into the Clerk's office and said, "A notice of appeal was filed minutes ago in Chicago appealing from the district court to this Court. You have jurisdiction now. Here are two emergency motions for a stay pending appeal." Pamela Twiford in the clerk's office received the papers, docketed the appeal, and we were off and running.

In the case below, Theodore (Ted) Anderson and James T. Williams⁷ had represented plaintiffs at trial.⁸ Mattel had hired Granger Cook, Jr. as lead defense counsel.⁹ I was second chair. For the appeal, Mattel added an "of counsel"—Hon. Philip W. Tone, who had recently resigned as a judge of the Seventh Circuit on April 30, 1980 and returned to private practice at Jenner & Block.¹⁰

Before commenting on the oral argument, a background about the facts and issues in the case will be helpful.

II. The District Court Case

A. Parties and the Invention

The patent owner was Sanders Associates, Inc.,¹¹ a company involved mainly in anti-submarine warfare and electronic countermeasures. A small team of its engineers had some ideas about using a television to play video games in 1966-67 and developed a simple analog circuit to implement their conception for a ball-and-paddle game.¹² Video games were known, but they did not use a television receiver for the game display.¹³ Sanders' work was putatively the earliest work on a ball-and-paddle game played on that kind of display device.¹⁴

⁷ After practicing in Chicago for many years, Ted Anderson retired from over fifty years of patent practice and lives in Wisconsin. James T. Williams eventually moved to New York City and practices with Sullivan & Cromwell LLP. See *James T. Williams*, SULLIVAN & CROMWELL LLP, <http://www.sullcrom.com/lawyers/JamesT-Williams> (last visited July 8, 2015).

⁸ *Magnavox Co.*, 216 USPQ at 31.

⁹ *Id.*

¹⁰ See *History of the Federal Judiciary: Tone, Philip Willis*, FEDERAL JUDICIAL CENTER, <http://www.fjc.gov/servlet/nGetInfo?jid=2398&cid=999&ctype=na&instate=na> (last visited July 8, 2015); *Distinguished Alumni Awards: Philip W. Tone*, THE UNIVERSITY OF IOWA ALUMNI ASSOCIATION, <http://www.iowalum.com/daa/search/profile.cfm?ID=67> (last visited July 8, 2015).

¹¹ See *Magnavox Co.*, 216 USPQ at 31.

¹² See *id.* at 33.

¹³ See *id.* at 34.

¹⁴ See *id.*

B. The Patent in Suit

Sanders received a group of patents on its work.¹⁵ The patented invention in U.S. Reissue Patent 28,507 disclosed analog circuitry to generate symbols for display on a television receiver.¹⁶ One symbol represented a paddle and another represented a ball.¹⁷ The output was supplied to a television set.¹⁸ The patent claims referred to means for generating a “hit symbol,” a “hitting symbol,” and imparting a “distinct motion” to the hit symbol in response to detecting coincidence between the hitting symbol and the hit symbol.¹⁹

C. Prior Art – Space War

Sanders’ development was not the first electronic video game. Several years earlier, hackers at the Massachusetts Institute of Technology and at Stanford University had devised and built a game called “Space War” that was played on a mainframe digital computer (a PDP-1 computer made by Digital Equipment Co.) and displayed on a cathode ray tube display device called a “point plotting” display system.²⁰ Space War involved shooting missiles from a spaceship that the player could maneuver.²¹ The object was to shoot at and hit an opponent’s spaceship.²² When a missile appeared to hit the opponent’s spaceship, the game displayed an explosion on the video screen.²³

Space War was very popular among computer hackers of the 1960s, but it was not a consumer product because of its reliance on an expensive main-

¹⁵ *Id.* at 33.

¹⁶ *See id.* at 35.

¹⁷ *Id.* at 36.

¹⁸ *See id.*

¹⁹ U.S. Patent No. Re 28,507 col. 26 l. 13 (filed Apr. 25, 1974) (reissued Aug. 5, 1975). Representative claim 25 recited:

In combination with a standard television receiver, apparatus for generating symbols upon the screen of the receiver to be manipulated by at least one participant, comprising: means for generating a hitting symbol, and means for generating a hit symbol including means for ascertaining coincidence between said hitting symbol and said hit symbol and means for imparting a distinct motion to said hit symbol upon coincidence.

²⁰ *Magnavox Co.*, 216 USPQ at 50–51.

²¹ *Id.* at 51.

²² *Id.*

²³ *Id.* During the course of discovery, we came into possession of a set of punched tapes containing programming for Space War. We took a deposition at the Digital Equipment Museum and used one of their mainframes to display and generate a motion picture video of the game. It turned out that the version of the game we obtained predated the Museum’s own copy, so they made a copy for their archives.

frame computer and a point display system.²⁴ It did not use a “television”—a low-cost consumer appliance.²⁵

D. “Odyssey” and “Pong”

The Magnavox Company became a licensee of Sanders Associates and introduced a primitive ball-and-paddle game called “Odyssey,” played using a television receiver, in 1972.²⁶ In 1973, Atari released its wildly successful “Pong” arcade game.²⁷ The industry flourished with this game, and the electronics industry provided more and more video games of the “ball-and-paddle” type.²⁸

E. The Accused Product – The Mattel INTELLIVISION® System

Miniaturization was afoot, and Intel introduced its first microprocessors in 1971.²⁹ After that, microprocessors evolved like clockwork. They brought computing power to the consumer at a reasonable cost.³⁰ As they evolved, more intricate and realistic game programming became possible.³¹

Mattel took advantage of this low-cost computing power and developed a video game system in the late 1970s, calling it the INTELLIVISION® game system.³² It included a console (called a “Master Component”) which housed microprocessor circuitry and display circuitry to display the game on a con-

²⁴ *See id.*

²⁵ *Id.* at 34, 51. The basic difference between the point display used by the Space War hackers and the television receiver is simple. In the first one, the display system receives a set of data points, each indicating a location on the screen and intensity or brightness of that spot. The system fetches the first data point to be displayed, goes to that location on the screen, illuminates that spot in accordance with the intensity information, and then fetches the second data point to be displayed. The second data point can be anywhere else on the screen. It continues in this fashion. The point display system had no prescribed pattern of locations on the display screen that it had to access repetitively. In this sense, its nature is a “random access” display. It never sends the electron beam to locations where nothing is to be displayed. In contrast, a television display system is not a random access type of display. It sends an electron beam to every point on the screen sequentially in a pattern called a “raster” and illuminates that location, called a “pixel,” in accordance with the input signal it receives. The input signal must be ordered to correspond to the specified electron beam speed and location. *See id.* at 40–41.

²⁶ *See id.* at 33–34.

²⁷ *Id.* at 34.

²⁸ *See id.* at 36.

²⁹ *See id.* at 49–50.

³⁰ *See id.* at 50.

³¹ Magnavox introduced a microprocessor-based television game in 1978. *Id.* at 36.

³² *See id.* at 37.

sumer's television receiver.³³ Users could purchase modules to play various games.³⁴ They would place one module into the console to play a baseball game, another module for football, and so forth.³⁵ Mattel sold dozens of different cartridges to play a wide variety of games.³⁶

F. The Trial

Magnavox and Sanders (collectively "Magnavox") sued Mattel in 1980, alleging infringement of Re. 28,507.³⁷ They had sued others who used discrete digital circuits in video games,³⁸ but the Mattel system was the first microprocessor-based system brought to trial.³⁹ Plaintiffs filed the case in Chicago, IL, and it was assigned to Judge Leighton.⁴⁰

The case came to trial in 1982. Mattel proved up the Space War game and a computer terminal system called a "CC-30 Communication System"⁴¹ that was for the very purpose of displaying an output from a digital computer on a raster scan device (television monitor or receiver).⁴²

With the advent of the CC-30 display system, one could harness the power of the digital computer and display the output on a raster scan display.⁴³ This would include computers programmed to play video games with a ball and paddle and "distinct motion" in response to the paddle hitting the ball.⁴⁴ Mattel developed other prior art in preparation for trial but opted not to assert the invalidity of the '507 patent.⁴⁵ Its main defense was non-infringement of the claims, provided they were properly construed.⁴⁶ Mattel claimed that its programmed microprocessor was not the same circuitry as disclosed in Re. 28,507—general analog circuits.⁴⁷ Nor could it be equivalent to them.

³³ See *id.* at 36–37.

³⁴ *Id.* at 36.

³⁵ *Id.* at 37.

³⁶ See *id.* at 47.

³⁷ *Id.* at 31.

³⁸ *Id.* at 32 (citing *Magnavox Co. v. Chicago Dynamic Indus.*, 201 USPQ 25 (N.D. Ill. 1977)).

³⁹ See *id.*

⁴⁰ *Id.* at 31.

⁴¹ *Id.* at 50.

⁴² See *id.* The first CC-30 Communication System went to Lawrence Livermore Labs. At the Labs' deposition, we learned that the Labs used a truncated ASCII code of 5 or 6 bits instead of 7 bits. They called it "half-ASCII."

⁴³ See *id.*

⁴⁴ See *Magnavox Co. v. Chicago Dynamic Inds.*, 201 USPQ 25, 26–27 (N.D. Ill. 1977).

⁴⁵ *Magnavox Co.*, 216 USPQ at 51.

⁴⁶ See *id.* at 50.

⁴⁷ See *id.* at 48.

Mattel asserted a defense that Magnavox characterized as “following the prior art.”⁴⁸ Mattel claimed that the prior art limited the scope of what could be equivalent to the claimed subject matter.⁴⁹

G. The District Court Opinion

Following a nine-day trial, Judge Leighton orally announced his decision immediately after closing arguments. He rejected Mattel’s defense and found for plaintiffs.⁵⁰ His oral decision included no comment about equivalents, reverse equivalents, or the prior art. Because Mattel was not contesting validity,⁵¹ the judge believed he was free to construe the claims as broadly as he wanted and said so from the bench. He decided that the words of the claim describe the INTELLIVISION[®] system and thereby established infringement.⁵²

Judge Leighton invited plaintiffs to submit proposed findings of fact and conclusions of law. After those were submitted, he adopted them almost without change as the court’s opinion. Like the oral decision, the written opinion does not include any analysis of how “means plus function” claim elements must be construed under 35 U.S.C. § 112.⁵³ The opinion did not reproduce a claim from the patent in suit. The court said that Mattel’s circuitry was “directly analogous” to the patent’s circuitry and that both of them included game play circuits and display circuits.⁵⁴ Indeed, his conclusions of law stated that in determining infringement “based upon real identity of means, operation and result, it is necessary to note that it is the claim and not the preferred embodiment which is to be used for comparison.”⁵⁵ It seemed as though the court was reading “means” as anything under the sun that performs the recited function. The district court characterized Mattel’s game as merely an improvement that does not avoid infringement.⁵⁶ It ruled that, to sustain a “following the prior art” defense, Mattel had to prove that the “prior art must fully anticipate the invention” and had to show that the accused product is built “solely according to the teachings of the prior art.”⁵⁷

⁴⁸ See *id.* at 50 (describing Mattel’s defense as asserting that there is no infringement because the “accused games follow the teachings of the prior art rather than” the patent at issue).

⁴⁹ See *id.* at 50–51.

⁵⁰ *Id.* at 61.

⁵¹ *Id.* at 32.

⁵² See *id.* at 57–59.

⁵³ See generally *id.*

⁵⁴ *Id.* at 48.

⁵⁵ *Id.* at 57 (quoting *Deere & Co. v. Int’l Harvester Co.*, 658 F.2d 1137, 1142 (7th Cir. 1981)) (internal quotation marks omitted).

⁵⁶ *Id.* at 58.

⁵⁷ *Id.*

III. Federal Circuit Proceedings

A. The Briefing

1. *The Appellants' Brief*

On December 3, 1982, Mattel served a 34-page appellants' brief on Messrs. Anderson and Williams, unaware that plaintiffs were changing counsel. In the brief, Mattel argued that the Federal Circuit's review could not be limited to the clearly erroneous standard because, among other things, a major issue was the construction of the claim—an issue of law. Mattel charged that the district court had not followed the mandate of 35 U.S.C. § 112 with regard to means plus function claims. Mattel explained, "Indeed, the District Court never even mentioned or referred to 35 U.S.C. § 112 in its oral opinion or in its adopted Findings of Fact and Conclusions of Law." Whereas Magnavox had characterized Mattel's prior art defense as "following the prior art,"⁵⁸ Mattel also explained that the prior art was a factor that bears on what can be considered an equivalent.⁵⁹

2. *The Appellees' Brief*

On December 23, 1982, appellees served their "red" brief. To defend the judgment and injunction they had in hand, plaintiffs-appellees hired the venerable D. Dennis Allegretti as lead appeal counsel. His appellate experience included arguing for the respondent at the Supreme Court in *Parker v. Flook*.⁶⁰ Mark T. Banner was second chair to Mr. Allegretti on the appellees' brief.

That Appellees' Brief is the first and last one in my experience where an appellee did not provide a counter-statement of the facts. Indeed, the rules did not call for one. The brief was only fourteen pages long.⁶¹ Magnavox argued that (1) equivalency was an issue of fact, (2) that the trial court followed the well-established methodology for determining infringement, (3) that it properly determined the claim meaning and found literal infringement, (4) that it properly found equivalency despite the differences Mattel pointed out, (5) that the procedure in adopting plaintiffs' proposed findings of fact was proper, and (6) that judicial estoppel did not bar plaintiffs from the interpretation of the claims they used at trial to attack Mattel.

⁵⁸ See *id.* at 50.

⁵⁹ See *Coleco Indus., Inc. v. U.S. Int'l Trade Comm'n*, 573 F.2d 1247, 1254 (C.C.P.A. 1978) ("What constitutes equivalency must be determined against the context of the patent, the prior art, and the particular circumstances of the case.").

⁶⁰ 437 U.S. 584 (1978).

⁶¹ The Federal Circuit had not yet adopted its requirement for 14-point font or double spacing; so the briefs in this appeal were single spaced and used a smaller font.

3. Mattel's Reply Brief

On January 3, 1983, Mattel served a 15-page reply brief. It again addressed the standard of review and urged (1) that Magnavox had argued an improper two-prong test instead of the proper three-pronged test for equivalency, (2) that Magnavox failed to offer any proof that the accused INTELLIVISION[®] games and the patented circuit are equivalent, (3) that the district court failed to find the proper meaning of the claims, (4) that intrinsic differences between the accused Mattel games precluded finding equivalency, and (5) that Magnavox was espousing a theory where all products that reach the same results as the patented circuit must be equivalent. Mattel reaffirmed that judicial estoppel applied because in prior trials, Magnavox had made representations about the prior art to sustain validity and obtain holdings of infringement and now it was contending that the accused games, which were like that same prior art, infringed.

B. Oral Argument for Mattel

The oral argument occurred on January 5, 1983, just two days after the reply brief was filed. We were surprised to see five judges take the bench—Chief Judge Howard T. Markey and Circuit Judges Giles S. Rich, Oscar H. Davis, Philip Nichols, Jr., and Helen W. Nies (who later became Chief Judge).⁶²

Granger Cook argued for Mattel and explained that the patent taught a low-cost, simple circuit to play a video game without using a computer. Chief Judge Markey had Mr. Cook confirm that there was no validity issue before the court. Mr. Cook explained that Magnavox did not describe the circuit to the trial court, did not compare the accused product to the patented circuit, and had not offered testimony that there was equivalence. According to Mattel, Magnavox simply tried the case as though § 112, paragraph 6 did not apply to the “means plus function” claim elements.

Judge Nies astutely raised the topic of whether there were differences between “equivalents” under § 112 and equivalents under the doctrine of equivalents. Further, she asked the intriguing question of whether there was any difference in the standard of review in respect of findings of infringement under § 112’s “equivalents thereof” provision or the doctrine of equivalents.

Judge Davis confirmed that Mattel’s position was that, under § 112, the court must look to the circuit in the patent, not (just) the claim. This prompted Chief Judge Markey to ask what in the accused device was not equivalent. Mr. Cook answered that nothing was equivalent. The Chief Judge quipped that what he got from reading Mattel’s brief was that “nothing is equivalent

⁶² There appears to be no recording or transcript of the oral argument. The discussion of the oral argument is based on the author’s personal notes taken at the argument supplemented by personal recollection.

to nothing.” Mr. Cook explained that the proofs in this case showed that there was no equivalence.

Judge Davis then asked what was wrong with the district court’s fact findings on equivalence. Mr. Cook answered that Fact Findings 104–125 were inadequate because they do not focus on the claim elements. They did not focus on the structure, operation, and results for each of the four “means” elements. Chief Judge Markey then asked whether all twenty-one of these fact findings were erroneous, and Mr. Cook responded that they were, although some parts of them could have been accurate.

Chief Judge Markey asked whether Mattel conceded literal infringement. Mr. Cook emphatically denied literal infringement, even though the words of the claim did read on the accused product. Judge Davis asked whether readability and literal infringement were the same thing in this case. This led Judge Nies to ask if Mattel relied on *Boyden Power-Brake Co. v. Westinghouse*,⁶³ the classic reverse doctrine of equivalents Supreme Court case.⁶⁴ When Mr. Cook confirmed that we did, Chief Judge Markey then explained that some courts hold that literal infringement (readability) is enough, but that is not the law (he said).⁶⁵

Judge Rich then questioned what test Mattel proposed for infringement of a means plus function claim element. Mr. Cook answered that infringement required substantially the same means, function, way, and result, a four-part test based on CCPA cases, noting however that the U.S. Court of Claims used a different three-pronged test expressed in varying terms.⁶⁶ Judge Rich

⁶³ 170 U.S. 537 (1898).

⁶⁴ See, e.g., Mark D. Janis, *Unmasking Structural Equivalency: The Intersection of § 112, ¶6 Equivalents and the Doctrine of Equivalents*, 4 ALB. L.J. SCI. & TECH. 205, 213 n.49 (1994) (“The reverse doctrine of equivalents traces back to *Boyden Power Brake Co. v. Westinghouse*, 170 U.S. 537 (1898)”).

⁶⁵ See, e.g., *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 405, 413 (Ct. Cl. 1967), *cert. denied*, 434 U.S. 1051 (1978) (finding no infringement where accused products did not operate in substantially the same way as the claim requires or achieve the same or a substantially similar result).

⁶⁶ See, e.g., *Bendix Corp. v. United States*, 600 F.2d 1364, 1372 n.7 (Ct. Cl. 1979) (“In addition to performing substantially the same functions . . . , substantially the same kinds of structures operating in substantially the same way . . . [i]s sufficient to make out a case of infringement.”); *Gen. Elec. Co. v. United States*, 572 F.2d 745, 770 (Ct. Cl. 1978) (“[T]he devices were in fact equivalent, i.e., operating in substantially the same way, performing substantially the same function, and producing substantially the same result.”); *Lockheed Aircraft Corp. v. United States*, 553 F.2d 69, 80 (Ct. Cl. 1977) (“[T]he accused device must additionally be shown to substantively infringe the claims by performing the same work, in substantially the same manner to achieve substantially the same result as the claimed device.” (citing *Autogiro Co.*, 384 F.2d at 400)); *Interdent Corp. v. United States*, 531 F.2d 547, 550

asked about the relationship of “substantially” to the equivalency inquiry and pressed further to confirm that it was in the word “substantially” that equivalency arose. However, Mr. Cook responded that the uncontradicted evidence showed that there was no equivalence in this case.

Further considering § 112 equivalency, Judge Nies noted that § 112 equivalence was not the same as the doctrine of equivalence, as one was limitative while the other was expansive. Mr. Cook agreed that that was a “fascinating topic” and raised the question of whether the doctrine of equivalence should have applied to means plus function claims at all. Judge Nies followed up by asking whether the court should have limited equivalents to the time the patent issued.

C. Oral Argument for Magnavox

Dennis Allegretti argued for Magnavox, noting first that the early decisions of this new court would be regarded as bellwether decisions. He then attacked one of Mattel’s statements in the conclusion of the reply brief, namely that Magnavox had failed to introduce evidence on equivalence. He asserted that the Appendix was lacking the evidence on equivalence but that there was “copious evidence” of equivalence in the case, citing one witness’ testimony and asserting that Magnavox went step by step to show equivalence. This was not a naked conclusion of infringement, he argued.

Judge Davis pressed Mr. Allegretti to explain why a hard-wired analog circuit was equivalent to a digital computer. After all, computers were known, and the inventor here began in a different way. He wanted a low-cost home game for the general public. These were not the same in any way—one was a big system, while the other was small. He asked why these were substantially the same means. Judge Rich reiterated that question.

Still thinking about equivalents, Judge Nies embellished that in the Supreme Court’s *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*⁶⁷ case, the invention was chemical, so there was no “means.” The test, she noted, addressed function, way, and result. Judge Rich added that neither *Graver Tank* nor § 112 called for substantially the same “means.”⁶⁸

(Ct. Cl. 1976) (“Rather, the structural limitations of a claim may be expanded to include equivalent embodiments that perform substantially the same function in substantially the same way to produce substantially the same result as the disclosed invention.”).

⁶⁷ 339 U.S. 605 (1950).

⁶⁸ However, just a short time earlier, one of the Court’s predecessors had stated, “For an accused process to infringe under the doctrine of equivalents, it must employ *substantially the same means*, to achieve substantially the same results, in substantially the same way, as the patented process.” *Sealed Air Corp. v. U.S. Int’l Trade Comm’n*, 645 F.2d 976, 984 (C.C.P.A. 1981) (emphasis added) (citing *Graver Tank*, 339 U.S. at 608) (including Judges

Judge Rich explained that in the development of electronics, computers have been replacing hard-wired circuitry because they did the same job better. Using a computer was just another way of getting the same result. Judge Nies followed up by asking whether one could reach the claimed result by using computer prior art. Mr. Allegretti answered that one *could* have done that but Mattel did not; it was Mr. Rusch (the inventor named on the patent) who taught the art how to do it. She questioned whether Mattel and the patented invention performed substantially the same function—obtaining the correct timing (for a raster scan display system). This prompted Judge Davis to ask whether the relationship to the television synchronizing signal was a basis for distinction from the prior art, and Mr. Allegretti said it was.

Judge Nies then suggested that the district court’s Conclusion of Law #3 was wrong. That conclusion was that the claims were the sole measure of the patent grant, and that neither the specification nor the drawings limited the claims. She asked whether the court could find equivalence of “means” without looking at the specification. Mr. Allegretti conceded that a court could not so find. Judge Rich concurred, stating that one could not have determined claim scope without considering the specification.

Judge Davis asked whether the ultimate question was whether there was equivalence here. Mr. Allegretti denied that that was the ultimate question. Rather, it was whether the findings of fact of the district court were clearly erroneous.

D. Mattel’s Rebuttal

In rebuttal, Mr. Cook replied to the “copious evidence” quip, explaining that Magnavox had already had its chance to designate for the Appendix. He explained also that the findings of fact were simply not specific to the elements required to be considered.

He explained that importantly, the district court had failed to consider the prior art in determining the scope of the claims, and Supreme Court law and *Hale Fire Pump Co. v. Tokai, Ltd.*⁶⁹ (a C.C.P.A. case) were clear that courts must consider the prior art in determining the range of equivalents.⁷⁰ It is

Markey, Rich, and Nies on the panel); *accord* *Hale Fire Pump Co. v. Tokai, Ltd.*, 614 F.2d 1278, 1283 (C.C.P.A. 1980) (“As properly stated by ITC, under the doctrine of equivalents, the test is whether the allegedly infringing device employs substantially the same means to accomplish substantially the same result in substantially the same way.”) (including again, Judges Markey and Rich).

⁶⁹ 614 F.2d 1278 (C.C.P.A. 1980).

⁷⁰ *See id.* at 1283–84 (explaining the scope of means plus function claim elements in determining infringement).

not decided in a vacuum. Further, the scope of the asserted claims could not extend so far as to embrace the prior art.⁷¹

Conclusion

The Court requested the entire record from the district court on January 17, 1983. However, after the oral argument, the parties discussed settlement and jointly moved on February 1 to delay release of the decision up to and including February 14. After the parties reached a settlement, Mr. Cook advised the Court. Mattel filed a stipulation for dismissal of the appeal on February 9, and the Court dismissed the case on February 10. Mr. Cook indicated that the Court was rather unhappy with the news of the settlement, as it occurred on the verge of releasing an extensive opinion. One can only surmise what that opinion contained, who its author was, and who would have prevailed.

The question presented in *Magnavox v. Mattel* may have influenced subsequent decisions of the Court. In August 1983, Judge Rich (with Chief Judge Markey on the panel) wrote that a claim drafted in “means plus function format . . . is construed to cover the corresponding structure . . . described in the specification and equivalents thereof.”⁷² In March 1984, Judge Nies (with Chief Judge Markey on the panel) ruled that a means plus function claim element is not anticipated by prior art that failed to perform the function recited in the claim.⁷³ In March 1985, Chief Judge Markey (with Judge Nichols on the panel) noted that the infringement question for a means plus function claim element is whether the “means in the accused device which performs the function stated in the claim is the same as or an equivalent of the corresponding structure described in the patentee’s specification as performing that function.”⁷⁴ In May 1985, Judge Davis addressed means plus function claims, explaining that such a claim element covers the disclosed structure and its equivalents.⁷⁵ In June 1985, he interpreted a means plus function claim element according to the corresponding structure disclosed in the specification of the patent.⁷⁶ Finally, in 1987 the Court ruled en banc that the scope of a “means” claim element depends on what the corresponding

⁷¹ This idea foreshadowed the hypothetical claim analysis sometimes used by courts to determine the scope of equivalents. See *infra* note 81.

⁷² *In re Mulder*, 716 F.2d 1542, 1549 (Fed. Cir. 1983) (quoting 35 U.S.C. § 112) (internal quotation marks omitted).

⁷³ See *RCA Corp. v. Applied Digital Data Sys., Inc.*, 730 F.2d 1440, 1445 n.5 (Fed. Cir. 1984).

⁷⁴ *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 1575 (Fed. Cir. 1985).

⁷⁵ *Palumbo v. Don-Joy Co.*, 762 F.2d 969, 974 (Fed. Cir. 1985), *overruled in part on other grounds*, *Johnston v. IVAC Corp.*, 885 F.2d 1574 (Fed. Cir. 1989).

⁷⁶ *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 862–63 (Fed. Cir. 1985).

structure is in the written description, and a “means” claim does not mean “anything under the sun” that performs the recited function.⁷⁷

It seemed at oral argument that the court would reject Mattel’s proposed prong of “substantially the same means,” as later decisions settled into the tripartite function-way-result test for equivalents or the “insubstantial differences” test. However, in an opinion from August 1984, Judge Davis (with Chief Judge Markey on the panel) characterized the test for equivalency as “functions, *means*, and result.”⁷⁸

With respect to Mattel’s defense that the prior art limits the scope of equivalents, the Federal Circuit developed a line of cases in accordance with the Supreme Court precedent stating: “What constitutes equivalency must be determined against the context of the patent, *the prior art*, and the particular circumstances of the case.”⁷⁹ Numerous Federal Circuit rulings explain the impact of the prior art on equivalents,⁸⁰ including the hypothetical claim analysis.⁸¹

⁷⁷ Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 934 (Fed. Cir. 1987) (en banc). The court stated:

Thus, section 112, paragraph 6, rules out the possibility that any and every means which performs the function specified in the claim *literally* satisfies that limitation. * * * *

To determine whether a claim limitation is met literally, where expressed as a means for performing a stated function, the court must compare the accused structure *with the disclosed structure*, and must find equivalent *structure* as well as *identity* of claimed *function* for that structure.

⁷⁸ Nestier Corp. v. Menasha Corp.-Lewisystems Div., 739 F.2d 1576, 1579 (Fed. Cir. 1984) (emphasis added).

⁷⁹ Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 609 (1950) (emphasis added).

⁸⁰ See, e.g., Senmed, Inc. v. Richard-Allen Med. Indus., 888 F.2d 815, 821 (Fed. Cir. 1989) (“It is well established that limitations in a claim cannot be given a range of equivalents so wide as to cause the claim to encompass anything in the prior art.”); Ryco, Inc. v. Ag-Bag Corp., 857 F.2d 1418, 1426 (Fed. Cir. 1988) (“[T]he doctrine will not be used to extend a patent claim to cover a device in the public domain, i.e., found in the prior art applicable to the patent.”); see also Gemalto S.A. v. HTC Corp., 754 F.3d 1364, 1373 (Fed. Cir. 2014).

⁸¹ See, e.g., Streamfeeder, LLC v. Sure-Feed Sys., Inc., 175 F.3d 974, 981 (Fed. Cir. 1999); Marquip, Inc. v. Fosber Am., Inc., 198 F.3d 1363, 1367 (Fed. Cir. 1999); Key Mfg. Grp., Inc. v. Microdot, Inc., 925 F.2d 1444, 1449 (Fed. Cir. 1991); Wilson Sporting Goods Co. v. David Geoffrey & Assocs., 904 F.2d 677, 685 (Fed. Cir. 1990).