

# **United States Court Of Appeals for the Federal Circuit**

2007-1493, -1494, -1495, -1496, -1497, -1498, -1499, -1514, -1573,  
2008-1004, -1009, -1010, -1012, -1013, -1015, -1018, -1019

KYOCERA WIRELESS CORPORATION,

Appellant,

and

QUALCOMM INCORPORATED,

Appellant,

and

MOTOROLA, INC.,

Appellant,

and

SAMSUNG ELECTRONICS CORPORATION, LTD.,

Appellant,

and

LG ELECTRONICS MOBILECOMM U.S.A., INC.,

Appellant,

and

SANYO FISHER CO.,

Appellant,

and

T-MOBILE USA, INC.,

Appellant,

and

AT&T MOBILITY, LLC (formerly known as Cingular Wireless, LLC),

Appellant,

and

SPRINT NEXTEL CORPORATION,

Appellant,

and

PALM, INC.,

Appellant,

and

PANTECH WIRELESS, INC., PANTECH CO., LTD.,  
and PANTECH & CURITEL COMMUNICATIONS, INC.,

Appellants,

and

UT STARCOM, INC.,

Appellant,

and

HIGH TECH COMPUTER CORPORATION,

Appellant,

and

SHENZHEN HUAWEI COMMUNICATION TECHNOLOGIES CO., LTD.,

Appellant,

and

RESEARCH IN MOTION LIMITED and RESEARCH IN MOTION CORPORATION,

Appellants,

and

FOXCONN INTERNATIONAL HOLDINGS LTD.,

Appellant,

and

CASIO HITACHI MOBILE COMMUNICATIONS COMPANY, LTD.,

Appellant,

v.

INTERNATIONAL TRADE COMMISSION,

Appellee,

and

BROADCOM CORPORATION,

Intervenor.

Kenneth W. Starr, Kirkland & Ellis LLP, of Los Angeles, California, argued for appellants, Motorola, Inc., Samsung Electronics Corporation, Ltd., Kyocera Wireless Corporation, LG Electronics Mobilecomm U.S.A., Inc., and Sprint Nextel Corporation.

Gregory A. Castanias, Jones Day, of Washington, DC, argued for appellants Foxconn International Holdings Ltd., Casio Hitachi Mobile Communications Company, Ltd., Palm Inc., Sanyo Fisher Co., Pantech & Curitel Communications, et al. High Tech Computer Corporation, Shenzhen Huawei Communication Technologies Co. Ltd., and UT Starcom, Inc.

Carter G. Phillips, Sidley Austin LLP, of Washington, DC, argued for appellant Qualcomm Incorporated. With him on the brief were Stephen B. Kinnaird, Robert A. Parker, William K. West, Jr., Cecilia H. Gonzalez, and Juliana M. Cofrancesco, Howrey LLP, of Washington, DC; Karin J. Kramer, Howrey LLP, of San Francisco, California; Timothy S. Teter and Lorie R.E. Ploeger, Cooley Godward Kronish LLP, of Palo Alto, California; and Stanley J. Panikowski, DLA Piper US LLP, of San Diego, California. Of counsel was William D.A. Zerhouni, Covington & Burling LLP, of Washington, DC.

Claudia W. Frost, Pillsbury Winthrop Shaw Pittman LLP, of Houston, Texas, argued for appellant T-Mobile USA, Inc., AT&T Mobility LLC, Research in Motion Limited, et al.

Andrea C. Casson, Assistant General Counsel for Litigation, Office of the General Counsel, United States International Trade Commission of Washington, DC, argued for appellee. With her on the brief were James M. Lyons, General Counsel, Michael Liberman, Paul M. Bartowski, and James A. Worth, Attorneys.

Robert A. Van Nest, Keker & Van Nest, LLP, of San Francisco, California, argued for intervenor. With him on the brief were Ragesh K. Tangri, Steven Hirsh, Daniel E. Purcell, and Steven K. Taylor. Of counsel were James M. Dowd, Gregory H. Lantier, and William G. McElwain, Wilmer Cutler Pickering Hale & Dorr, LLP, of Washington, DC; and Scott P. McBride, and Alejandro Menchaca, McAndrews, Held & Malloy, Ltd., of Chicago, Illinois.

Don F. Livornese, Howrey LLP, of Los Angeles, California, for appellant Kyocera Wireless Corp. With him on the brief were Roman E. Darmer and Richard J. Burdge, Jr. Of counsel were Tom Crunk and Bradley J. Sparks.

Russell E. Levine, Kirkland & Ellis LLP, of Chicago, Illinois, for appellant Motorola, Inc. With him on the brief were Christopher R. Liro and Nyika O. Strickland.

Russell E. Levine, Kirkland & Ellis LLP, of Chicago, Illinois, for appellant Samsung Electronics Corporation, Ltd. With him on the brief were Gregory S. Arovas and Todd M. Friedman.

Mark S. Zolno, Katten Muchin Rosenman LLP, of Chicago, Illinois, for appellant Sanyo Fisher Co. With him on the brief were Michael A. Dorfman and Eric R. Rock, and James A. Gromada, of Washington, DC. Of counsel was Kazumune V. Kano.

Michael J. McKeon, Fish & Richardson, P.C., of Washington, DC, for appellant LG Electronics MobileComm U.S.A., Inc. With him on the brief was Scott A. Elengold.

Josh A. Krevitt, Gibson, Dunn & Crutcher LLP, of New York, New York, for appellant T-Mobile USA, Inc. With him on the brief was Kevin W. Cherry. Of counsel were Mark A. Perry, Mathew D. McGill, and Minodora D. Vancea, of Washington, DC. Of counsel was Richard M. Kohel.

Kathryn L. Clune, Crowell & Moring LLP, of Washington, DC, for appellant Sprint Nextel Corporation. With her on the brief were Richard McMillan, Jr. and Lisa A. Murray.

V. James Adduci, II, Adduci, Mastriani & Schaumberg, LLP, of Washington, DC, for appellant Palm, Inc. With him on the brief were Munford P. Hall, II, Patricia Larios, and Jamie D. Underwood.

Adam R. Hess, Pillsbury Winthrop Shaw Pittman LLP, of Washington, DC, for appellant Casio Hitachi Mobile Communications Company, Ltd.

Hae-Chan Park, H.C. Park & Associates, PLC, of Vienna, Virginia, for appellants Pantech & Curitel Communications, Inc., et al. With him on the brief was Wayne M. Helge.

Theodore T. Herhold, Townsend & Townsend & Crew LLP, of Palo Alto, California, for appellant Shenzhen Huawei Communication Technologies Co., Ltd.

Robert F. Aldrich, Dickstein Shapiro LLP, of Washington, DC, for appellant UT Starcom, Inc. On the brief was Charles W. Saber.

Steven E. Adkins, Jones Day, of Washington, DC, for appellant Foxconn International Holdings Ltd. With him on the brief was Kenneth R. Adamo, of Cleveland, Ohio.

William S. Feiler, Morgan & Finnegan, LLP, of New York, New York, for appellants Research In Motion Corporation, et al. On the brief were Peter N. Fill and Eric G. Wright, of Washington, DC. Of counsel was Robert K. Goethals, of New York, New York.

Christopher F. Corr, White & Case LLP, of Washington, DC, for appellant High Tech Computer Corporation. With him on the brief were Todd P. Taylor, Alexander W. Dennis. Of counsel on the brief was Warren S. Heit. Of counsel was Monisha Deka, of Washington, DC, and Farhenna Y. Rasheed, White & Case, LLP, of Palo Alto, California.

Appealed from: United States International Trade Commission

# **United States Court of Appeals for the Federal Circuit**

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-1497, -1498, -1499, -1514, -1573;  
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-1013, -1015, -1018, -1019

v.

INTERNATIONAL TRADE COMMISSION,

Appellee,

and

BROADCOM CORPORATION,

Intervenor

On appeal from the United States International Trade Commission in Investigation No. 337-TA-543.

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DECIDED: October 14, 2008

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Before RADER, BRYSON, and LINN, Circuit Judges.

RADER, Circuit Judge.

The United States International Trade Commission (“ITC” or “Commission”) determined that Qualcomm Incorporated (“Qualcomm”) infringed Broadcom Corporation’s (“Broadcom’s”) United States Patent 6,714,983 (“983 Patent”) with its imports. As a remedy, the ITC issued a limited exclusion order (“LEO”) against the importation of all downstream products containing the accused technology. Aside from Qualcomm, the appellants in this action are Qualcomm’s customers. Some customers are wireless device manufacturers whose products are subject to the LEO. Others are wireless network operators whose networks depend on products subject to the LEO. Despite the broad downstream scope of the LEO, Broadcom named only Qualcomm as a respondent in its ITC complaint. Because the ITC correctly construed the critical disputed claim term in Broadcom’s patent, and because the ITC correctly rejected

Qualcomm's invalidity arguments under 35 U.S.C. §§ 102 and 103, this court affirms the ITC's finding that the '983 Patent is not invalid. This court also affirms the ITC's determination of no direct infringement by Qualcomm. However, because the ITC misapplied the standard for induced infringement, this court vacates and remands on infringement. Finally, because the ITC has no statutory authority to issue an LEO against downstream products of non-respondents, this court vacates and remands the limited exclusion order.

I.

Broadcom's '983 patent is entitled "Modular, portable data processing terminal for use in a communication network." The patent claims a mobile computing device that can both communicate with wireless networks and operate in a reduced power mode to extend battery life:

One or more circuits adapted for use in a mobile computing device comprising:  
a terminal adapted to receive battery power for at least one of the circuits;  
communication circuitry comprising a reduced power mode and being adapted to use a first wireless communication and a second wireless communication different from the first wireless communication to transmit data to access points, the communication circuitry reducing power by controlling the frequency of scanning for the access points; and  
processing circuitry arranged to process data received from the communication circuitry.

'983 Patent col.42 l.57-col.43 l.2 (Claim 1). In the liability phase at the ITC, the parties vigorously contested the interpretation of the phrase "a first wireless communication and a second wireless communication different from the first wireless communication." The ITC administrative law judge characterized this dispute in terms of "how different these wireless communications need to be." In re Certain Baseband Processor Chips &  
2007-1493, -1494, -1495, -1496,  
-1497, -1498, -1499, -1514, -1573;  
2008-1004, -1009, -1010, -1012,  
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Chipsets, Transmitter & Receiver (Radio) Chips, Power Control Chips, & Prod.  
Containing Same, Including Cellular Telephone Handsets, Inv. No. 337-TA-543, 2006  
ITC LEXIS 803, at \*185 (Int'l Trade Comm'n Oct. 10, 2006) ("Initial Determination").

Before the ITC, Qualcomm argued that "different" is extremely broad and is not limited to any particular type of difference. The ITC concluded Qualcomm's proposal was too broad and would "include any slight difference in wireless communications, without regard to the context of the claim." Id. The ITC construed the term as "refer[ring] to two different methods of communication." Id. at \*186. In this appeal, Qualcomm challenges the ITC's construction as too narrow and argues instead for its originally proffered broad interpretation.

This action began on May 19, 2005, when Broadcom filed a complaint in the ITC alleging unfair acts in violation of 19 U.S.C. § 1337 (Section 337 of the Tariff Act of 1930, or "Section 337"). Broadcom named Qualcomm, and only Qualcomm, as a respondent. Broadcom alleged that thirteen Qualcomm chips and chipsets infringe several Broadcom patents. The administrative law judge bifurcated the ITC's proceedings into separate liability and remedy proceedings.

On liability, the ITC determined that Qualcomm had not infringed two of Broadcom's patents (U.S. Patent Nos. 6,374,311 and 6,583,675). These aspects of the ITC's rulings were the subject of a separate, recently decided appeal. See Broadcom Corp. v. ITC, No. 2007-1164 (Fed. Cir. Sep. 19, 2008).

With regard to the '983 Patent, however, the ITC determined that Qualcomm's chips, when programmed to enable certain battery-saving features, infringe the '983 patent. Moreover, the ITC found Qualcomm liable for inducing third party

manufacturers to incorporate battery-saving software and Qualcomm's chips into their mobile devices. Further, the Commission rejected Qualcomm's anticipation and obviousness arguments under 35 U.S.C. §§ 102 and 103.

With regard to remedy, the ITC issued an LEO excluding “[h]andheld wireless communications devices, including cellular telephone handsets and PDAs, containing Qualcomm baseband processor chips or chipsets that are programmed to enable the power saving features covered by claims 1, 4, 8, 9, or 11 of U.S. Patent No. 6,714,983, wherein the chips or chipsets are manufactured abroad by or on behalf of Qualcomm Incorporated.” In re Certain Baseband Processor Chips & Chipsets, Transmitter & Receiver (Radio) Chips, Power Control Chips, & Prod. Containing Same, Including Cellular Telephone Handsets, Inv. No. 337-TA-543 3-4 (Int'l Trade Comm'n June 7, 2007) (“Limited Exclusion Order”).

Qualcomm appeals both the liability and remedy findings. Kyocera and other wireless device manufacturers—non-respondents to Broadcom's ITC complaint—are subject to the LEO because they purchase and incorporate Qualcomm chips into their mobile wireless devices outside the United States, and then import them into the United States for sale. AT&T and other wireless network carriers—also not named as respondents to Broadcom's complaint—deploy networks which depend on devices that include Qualcomm chips. This appeal consolidates the several appeals of Qualcomm and these third-party manufacturers and carriers. This court has jurisdiction to review ITC determinations under 28 U.S.C. § 1295(a)(6) and 19 U.S.C. § 1337(c).

A.

This court reviews claim construction without deference. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1451 (Fed. Cir. 1998) (en banc). Generally this court gives claim terms their ordinary and customary meanings, according to the customary understanding of a person of ordinary skill in the art who reads them in the context of the intrinsic record. See Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc). The specification “is the single best guide to the meaning of a disputed term.” Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). This court recognizes, however, “there is sometimes a fine line between reading a claim in light of the specification, and reading a limitation into the claim from the specification.” Comark Commcns., Inc. v. Harris Corp., 156 F.3d 1182, 1186 (Fed. Cir. 1998).

The disputed claim term in this case—“different”—appears in the following claim phrase: “[A] second wireless communication different from the first.” This phrase does not, in and of itself, suggest any limitation on the degree of difference between the two wireless communications. The phrase merely requires that the communications be “different,” without suggesting any manner or degree of difference.

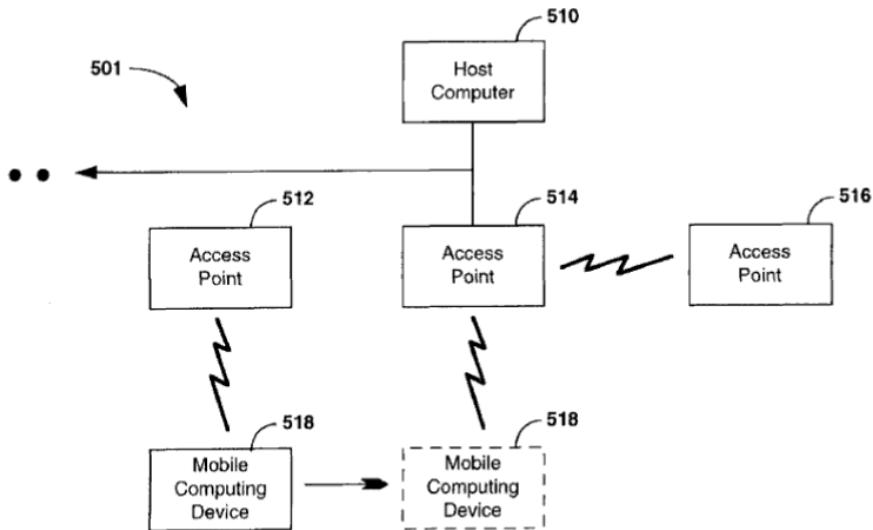
However, this court does not interpret claim terms in a vacuum, devoid of the context of the claim as a whole. See Hockerson-Halberstadt, Inc. v. Converse Inc., 183 F.3d 1369, 1374 (Fed. Cir. 1999) (“proper claim construction . . . demands interpretation of the entire claim in context, not a single element in isolation.”); ACTV, Inc. v. Walt Disney Co., 346 F.3d 1082, 1088 (Fed. Cir. 2003) (“While certain terms may be at the center of the claim construction debate, the context of the surrounding words of the

claim also must be considered . . . .”). Claim 1 requires “communication circuitry” “being adapted” to use the two different wireless communications. Communications circuitry capable of using a “first wireless communication” need not be “adapted” to use a “second wireless communication different from the first” unless the difference between the first and second communications is somehow significant. In this context, the disputed claim term suggests that the two claimed wireless communications are not merely “different” in any way, but in such a way that requires adaptations in “communication circuitry” to facilitate both wireless uses.

With this introduction, this court consults the specification to determine the nature of the potential differences in wireless communications. See V-Formation, Inc. v. Benetton Group SpA, 401 F.3d 1307, 1311 (Fed. Cir. 2005) (“In most cases, the best source for discerning this proper context is the patent specification wherein the patent applicant describes the invention.”). In the background section, the inventors explain that the prior art used different communication modules to achieve different methods of communication: “Communications supported by computer modules may include wired connection, such as over phone lines for a modem or through a wired local area network (LAN), and wireless communication such as a wireless LAN, a wide area network (WAN), or infrared.” ’983 Patent col.4 ll.52-56. The number of different communication methods in one device depended on the number of module slots in that computer. Therefore, “there is a need for a multipurpose computer module that can provide more than one peripheral function and control switching between those functions in a single module.” Id. col.5 ll.4-7.

The specification explains further that the invention addresses this need with a portable device adapted to accommodate different communications methods. The invention is a “portable data terminal” with “at least two communication transceivers having different operating characteristics for conducting data communications on . . . different subnetworks.” Id. col.5 ll.23-36. The specification supplies examples of different possible operating characteristics of these transceivers: “narrowband radio frequency, frequency-hopping or direct-sequence spread spectrum radio frequency, modem or other wired network communication, infrared, etc.” Id. col.9 ll.46-49. Moreover, the specification explains that the transceivers included in the invention’s mobile devices are “operable on any number of communication mediums, since the differences in their operating characteristics are isolated from the base module of the MCDs 1606 by a communication processor.” Id. col.42 ll.25-29. Thus, the specification consistently teaches that the relevant difference between the two claimed wireless communications is their method of communication.

Qualcomm argues that reading “different” to mean different methods of communication would impermissibly exclude preferred embodiments, specifically the one outlined in Figure 11:



**FIG. 11**

Figure 11 and its accompanying description describe the way a mobile communication device (“MCD”) can “roam” between base stations while connected to one or more networks. The MCD communicates with an “access point” in a “structured manner,” sending several messages such as “request-for-poll” messages, “data message[s],” “acknowledge” signals, and “POLL-DATA sequences.” Id. col.30 ll.15-24. According to Qualcomm, these structured messages use the same method of wireless communication. Therefore, Qualcomm contends, a first wireless communication (e.g., a request for poll message) and a second wireless communication (e.g., a data message) do not necessarily mean two methods of wireless communication within the context of the patent.

To the contrary, claim 1 of the '983 Patent may require a device capable of using two different wireless communication methods and still fall within the terms of Figure 11. Figure 11 describes communication with a device through one access point with just

one of those methods. The '983 Patent's inventors were clear that different access points could employ different communications methods: “[A]ccess point 1409 provides for communication via one type of radio communication while access point 1403 provides for another. For example, access point 1409 may provide a long-distance digital cellular link while access point 1413 provides for local spread spectrum link.” '983 patent col.39 ll.31-36. Further, “[t]he present invention contemplates various combinations of communication technologies, all accommodated by communication modules of MCD 1606.” Id. col.42, ll.22-26.

Thus, read in the context of the entire specification, Figure 11 merely provides exemplary details of a claimed device communicating with a particular access point using a particular method of communication. This Figure does not change claim 1’s requirement for a device “adapted” to use two different communications. The specification provides the necessary context for the difference between the claimed first and second wireless communications. The difference envisioned by the claim is a difference in their method of communication. In other words, the ITC properly construed the meaning of the term “different.”

Qualcomm also contends that this court’s construction of the same claim term in Sorensen v. ITC, 427 F.3d 1375 (Fed. Cir. 2005), mandates a broad construction of “different” in this different patent. The patent in Sorensen pertained to a method of spacing plastic mold sections during sequential steps of plastic injection molding. Id. at 1377. The claim in question required “injecting a second plastic material having *different characteristics* than the first plastic material . . . .” Id. at 1378. This court construed “different characteristics” to mean “any difference in characteristics between

the two injected materials,” including a difference in color alone. Id. at 1379. Qualcomm reads that particular holding to create a rule that use of the claim term “different” without further qualification must mean “any difference.”

Sorensen created no such categorical rule. In Sorensen, this court only discerned a broad meaning for the term “different” after concluding that a) the claim term in the context of the entire claim connoted that “different” implied any difference in characteristics and b) the specification and the prosecution history showed “no disavowal of claim scope in relation to material characteristics.” Id. at 1379. This court’s analysis of the context of this different claim as a whole, as well as the intrinsic record for this different patent, to arrive at the proper context for the term “different” is thus not inconsistent with Sorensen. In sum, the specification and context of the claim term in Sorensen did not qualify or limit the nature of the “different” characteristics of the plastic; the specification and context in this case show that the “different” wireless communications means a difference in the method of communication, not simply any conceivable difference. Accordingly, this court sustains the ITC determination that “different” first and second wireless communications refers to two different methods of communication.

## B.

Qualcomm argues the ITC erred by concluding the ’983 Patent claims are not anticipated by three pieces of prior art: U.S. Patent Nos. 4,964,121 (“Moore”); 5,128,938 (“Borras”); and 5,203,020 (“Sato”). Qualcomm does not contest the ITC’s findings that each of Moore, Borras, and Sato discloses communication via a single communication method. Thus, Qualcomm’s argument on appeal depends entirely on this court

disturbing the ITC's claim construction in favor of a broader understanding of the word "different."

Because this court affirms the ITC's claim construction and rejects Qualcomm's broader understanding of "different" in the context of claim 1 of the '983 patent, this court affirms the ITC's finding that the Moore, Borras, and Sato references do not anticipate under 35 U.S.C. § 102.

C.

Qualcomm further appeals the ITC's finding that a collection of technical specifications known as the Global System for Mobile Communications ("GSM") standard does not anticipate the asserted '983 claims. The GSM standard is a comprehensive set of specifications for a second generation ("2G") mobile network. The European Telecommunications Standards Institute ("ETSI"), an independent standards organization comprised of telecommunications manufacturers and carriers, devised this standard. The standards are technical specifications that describe one aspect of the technology for inter-operable GSM-compliant equipment.

The ITC determined Qualcomm did not show that the GSM standard was a "printed publication" under 35 U.S.C. § 102. Specifically, Qualcomm did not show that the GSM standard was publicly available. In addition, the ITC found the GSM standard did not constitute a single prior art reference for purposes of anticipation under 35 U.S.C. § 102. Initial Determination, 2006 ITC LEXIS 803, at \*267.

1.

"Whether an asserted anticipatory document qualifies as a 'printed publication' under § 102 is a legal conclusion based on underlying factual determinations." Cooper

Cameron Corp. v. Kvaerner Oilfield Prods., Inc., 291 F.3d 1317, 1321 (Fed. Cir. 2002).

This court reviews the legal conclusion without deference while according substantial evidence deference to the factual components of the determination. See Bourdeau Bros., Inc. v. ITC, 444 F.3d 1317, 1320 (Fed. Cir. 2006).

The “printed publication” requirement appears in 35 U.S.C. § 102: “A person shall be entitled to a patent unless . . . (b) the invention was patented or described in a printed publication in this or a foreign country . . . more than one year prior to the date of the application for patent in the United States.” “Because there are many ways in which a reference may be disseminated to the interested public, ‘public accessibility’ has been called the touchstone in determining whether a reference constitutes a ‘printed publication’ bar under 35 U.S.C. § 102(b).” In re Hall, 781 F.2d 897, 898-899 (Fed. Cir. 1986). A reference is publicly accessible “upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it . . . .” SRI Int'l, Inc. v. Internet Sec. Sys. Inc., 511 F.3d 1186, 1194 (Fed. Cir. 2008) (quoting Bruckelmyer v. Ground Heaters, Inc., 445 F.3d 1374, 1378 (Fed. Cir. 2006)). This court assesses public accessibility on a case-by-case basis. In re Cronyn, 890 F.2d 1158, 1161 (Fed. Cir. 1989).

The ITC concluded the GSM standard was not publicly available because it was analogous to the publication in Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931 (Fed. Cir. 1990). In Northern Telecom, the documents described a complex military system. The company maintaining the documents housed them in a proprietary library

with access restricted to persons authorized by the company. Id. at 936. Under these circumstances, the document was not sufficiently available to the public. Id. at 936-37.

In this case, however, the record shows that the GSM reference was not secluded under a similar veil of secrecy. The record shows that GSM specifications, though drafted within smaller technical subcommittees, were widely distributed before the critical date of the '983 Patent. Versions of the standard were "publicly available and released as consistent sets." Pautet Witness Statement 17, Jan. 23, 2006. Several U.S. companies took part in the ETSI work and had access to the GSM specifications through their European subsidiaries. The specifications themselves were visible to any member of the interested public without requesting them from an ETSI member. Further, ETSI did not impose restrictions on ETSI members to prevent them from disseminating information about the standard to non-members. Pautet Witness Statement 14, 19.

The ITC places inordinate emphasis on the record evidence that archival paper copies of the standard are maintained in a limited-access facility. The record does not show, however, that the standard was closed to public access in that manner at the time critical to the invention of the '983 Patent's claims. To the contrary, the record details the publication in 1992 of a seven-hundred page technical book entitled "The GSM System for Mobile Communications," referred to popularly as the "GSM bible." This "bible" sold more than 25,000 copies with the express purpose of giving wider access to the GSM standard. Pautet Witness Statement 6.

Indeed, the primary purpose of the GSM standard was to develop a system interoperable across national borders. This purpose made it crucial to grant access to

any interested parties. ETSI's broad membership is a testament to the fruition of this purpose. Thus, the GSM standard documents do not fall in the same confidential category as the Northern Telecom documents, which were not authorized for public release and were maintained under a policy of restricted access. Because the GSM standard was "sufficiently accessible, at least to the public interested in the art," this court finds insubstantial evidence for the ITC's conclusion that the GSM standard was not publicly available. See In re Hall, 781 F.2d at 899.

2.

This court next turns to Qualcomm's contention that the ITC incorrectly found that Qualcomm's proffered collection of eleven separate GSM specifications does not anticipate the asserted '983 Patent claims because the specifications do not together constitute a single reference for § 102 purposes. Qualcomm argues the different GSM specifications are like chapters of a book and function as a single, coherent reference that is simply too voluminous to bind into one volume.

This court requires that in order to anticipate a claim, "a single prior art reference must expressly or inherently disclose each claim limitation." Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1334 (Fed. Cir. 2008). The record evidence suggests that the GSM standard is not a single reference. The different specifications that comprise the GSM standard were authored by different subsets of authors at different times. Indeed, the GSM standard includes hundreds of individual specifications drafted by approximately ten different subgroups, each with its own title and separate page numbering. Each specification, though part of the greater GSM standard, stands as a separate document in its own right. Even Qualcomm's witness—admittedly one of the

most knowledgeable people in the world about the operation of GSM—testified that she had not read the entire standard and did not know of any person who had read the entire standard. Open Session Tr. 1712, Mar. 15, 2006. Under these circumstances, the GSM standard is actually several prior art references with separate dates of creation, rather than a single prior art reference.

Qualcomm asserts that each GSM specification incorporates the others by reference. Even if true, this fact does not qualify the GSM standard as a single reference. This court has been clear that in order for one document to incorporate another document by reference, the incorporating document must identify the incorporated document with detailed particularity, clearly indicating the specific material for incorporation. See Advanced Display Sys., Inc. v. Kent State Univ., 212 F.3d 1272, 1282 (Fed. Cir. 2000). At most, each relevant GSM specification identifies itself as a part of the greater GSM standard; specifications at times cross-reference other specifications. This vague referencing practice is hardly sufficient to meet this court's legal requirements for incorporation. In sum, the GSM standard is simply not a coherent whole document that can be assigned a single prior art date of creation.

For this reason, as opposed to the secrecy justification, this court affirms the ITC's determination that the GSM standard is not available for use as a single anticipating reference under § 102. Because the GSM standard is not a single reference for an anticipation examination, this court need not reach Qualcomm's arguments that the GSM standard discloses all the requirements of Broadcom's asserted claims.

D.

Qualcomm's final invalidity defense on appeal pertains to obviousness under 35 U.S.C. § 103. The Commission rejected Qualcomm's obviousness arguments, finding that Qualcomm waived this defense by failing to raise it in a timely manner. Qualcomm now argues it never had the opportunity to present evidence under the proper legal standard because the Supreme Court's decision in KSR Int'l Co. v. Teleflex, Inc., 127 S. Ct. 1727 (2007), was decided after the ITC's determination of liability. Accordingly, Qualcomm maintains, this court should now assess obviousness in the light of the Supreme Court's language in KSR.

Qualcomm cannot invoke intervening Supreme Court case law to correct its own procedural misstep. As the ITC correctly determined, Qualcomm did not set forth an obviousness analysis for the independent claims of the '983 patent until after the administrative law judge had made an initial determination. Neither Qualcomm's expert reports nor written testimony contained an obviousness opinion. Qualcomm's pre-hearing brief was similarly devoid of an obviousness analysis. This court need not engage in an obviousness inquiry when Qualcomm did not assert relevant obviousness arguments at the proper time. Further, because Qualcomm waived the defense of obviousness, this court declines to consider the merits of Qualcomm's position that Broadcom's asserted claims are obvious in light of the prior art. See Hazani v. U.S. ITC, 126 F.3d 1473, 1476-77 (Fed. Cir. 1997) ("We find no legal error in the administrative law judge's determination that the arguments that Hazani raised for the first time on reconsideration were untimely and could properly be rejected on that ground alone.").

## II.

Broadcom argued before the ITC that Qualcomm violated Section 337 through both direct and indirect infringement of the '983 Patent. As intervenor, Broadcom here challenges the ITC's finding of no direct infringement by Qualcomm as an alternative basis on which to sustain the Commission's Order. With regard to indirect infringement, Qualcomm appeals the Commission's finding of inducement.

### A.

The Commission unambiguously rejected Broadcom's sole proffer with regard to direct infringement by Qualcomm, which was an allegation relating to Qualcomm's importation and use of certain testing devices known as "Form Factor Accurate" (FFA) devices. Initial Determination, 2006 ITC LEXIS 803, at \*209-13.

This finding was amply supported by substantial evidence. Broadcom's own expert did not test any of Qualcomm's FFAs, and Broadcom's only real evidence regarding infringement by these devices was the testimony of three Qualcomm witnesses. Id. at \*213. The testimony of these witnesses, Messrs. Grob, Proakis, and Mollenkopf, did not come close to establishing direct infringement by Qualcomm. Mr. Grob's testimony did not make reference to a reduced power mode, and thus could not have established infringement of the asserted claims of the '983 Patent, which all require this feature. Id. at \*212. With regard to Dr. Proakis, substantial evidence supports the conclusion that his testimony was inconclusive, because he stated he had no "specific knowledge" as to how FFA testing was performed. Id. at \*213. Finally, Mr. Mollenkopf's testimony was equally unenlightening because (a) he was never personally involved in performing FFA testing, (b) his recollection was that such testing

occurred two years before the '983 patent issued, and (c) such recollection was still just a "guess." Mollenkopf Dep. 108:4-25, Dec. 9, 2005. In sum, because there was substantial evidence for the Commission to conclude that Broadcom failed to establish infringement by Qualcomm's FFA devices, this court affirms the finding of no direct infringement.

B.

Qualcomm's appeal of the ITC's finding of induced infringement is squarely before this court. The Commission found that the "MSM6250" baseband processor chip is representative of thirteen Qualcomm chips (all with the prefix "MSM") that Broadcom alleges infringe the '983 claims. Specifically, the Commission found that Qualcomm's MSM chips infringe the '983 Patent's asserted claims when they are programmed with computer source code ("system determination software") that implements battery-saving features such as reducing the frequency of scanning for network access points. Initial Determination, 2006 ITC LEXIS 803, at \*226.

For example, the ITC found that the MSM6250 chipset scans for an access point for up to fifteen minutes before entering into a power-saving search algorithm. If fifteen minutes of searching does not yield an access point, the system determination software directs the chipset to alternate between periods of scanning for an access point and powering down the communication circuitry. Such software alleviates the familiar problem of rapid battery drainage that occurs, for example, when a mobile phone is in a network "dead spot" and continually searches for an access network.

The ITC determined that Qualcomm's handset manufacturer customers directly infringe the '983 Patent by making handsets that incorporate the accused MSM chipsets

and system determination software. The ITC further determined that Qualcomm induces the infringing acts of its handset manufacturer customers by, *inter alia*, providing customers with the system determination software, training them on implementation of their mobile devices, providing software and firmware updates, offering customer support, furnishing promotional and technical documents for the accused MSM chipsets, and recommending that its customers implement battery saving features. *Id.*

Under 35 U.S.C. § 271(b), “[w]hoever actively induces infringement of a patent shall be liable as an infringer.” To prevail on inducement, “the patentee must show, first that there has been direct infringement, and second that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement.” Minn. Mining & Mfg. Co. v. Chemque, Inc., 303 F.3d 1294, 1304-05 (Fed. Cir. 2002) (citation omitted). In DSU Med. Corp. v. JMS Co., this court clarified en banc that the specific intent necessary to induce infringement “requires more than just intent to cause the acts that produce direct infringement. Beyond that threshold knowledge, the inducer must have an affirmative intent to cause direct infringement.” 471 F.3d 1293, 1306 (Fed. Cir. 2006) (en banc review of intent requirement).

The ITC released its initial determination before this court’s clarification of the intent standard for inducement in DSU. The ITC’s administrative law judge understood Federal Circuit law to permit a finding of inducement upon “a showing of either general or specific level of intent” and expressly adopted Broadcom’s argument that “the only intent required of the defendant is the intent to cause the acts that constitute infringement.” Initial Determination, 2006 ITC LEXIS 803 at \*126, \*225. Applying this

understanding of the law, the Commission determined that “Qualcomm intends to induce infringement because it provides its customers with the system determination code.” Id. at \*225.

Although thought to be proper at the time, the approach adopted by the ITC is improper under this court’s decision in DSU. Proof of intent to cause infringing acts is a necessary but not sufficient condition for induced infringement. Inducement additionally requires “evidence of culpable conduct, directed to encouraging another’s infringement,” i.e., specific intent to encourage infringement. DSU, 471 F.3d at 1306. This specific intent may, of course, be demonstrated by circumstantial evidence such as that presented by Broadcom. Id. But the ITC’s conclusion that “Qualcomm intends to induce infringement because it provides its customers with the system determination code” evinces, at most, a finding that Qualcomm generally intended to cause acts that produced infringement. Thus, the current record falls short of the necessary intent showing for inducement—that Qualcomm possessed a specific intent to cause infringement of Broadcom’s patent.

Because the Commission based its finding on an approach overruled by DSU, this court vacates and remands the ITC’s determination of induced infringement. On remand, the ITC will have the opportunity to examine whether Qualcomm’s conduct satisfies the specific intent requirement set forth in DSU.

### III.

Under the statutory framework of Section 337, the ITC must determine the appropriate remedy for an adjudged violation. Between July 6 and 11, 2006, the ITC held a hearing in which Broadcom, Qualcomm, and six intervenors (whose participation

was limited to the remedy phase) presented extensive testimony about proper remedies. Because virtually all putatively infringing articles sold for importation or imported into the United States are contained in handsets manufactured by downstream third parties, the Commission held a further remedy hearing on March 21-22, 2007 in which it considered evidence (both written and live) related to remedy and the public interest. The Commission entertained testimony from dozens of witnesses.

On June 7, 2007, the Commission issued a lengthy remedy decision setting forth a limited exclusion order. The LEO covers both Qualcomm baseband processor chips programmed to enable the power saving features covered by claims 1, 4, 8, 9, or 11 of the '983 patent; and handheld wireless devices (including cellular phones and personal digital assistants) that contain such programmed Qualcomm chips and that were not imported for sale before the date of the order. Limited Exclusion Order, Inv. No. 337-TA-543 at 3-4.

On appeal, Qualcomm and the third-party appellants argue, *inter alia*, that the Commission exceeded its statutory authority by issuing an LEO that excludes imports of downstream manufacturers who were not named as respondents in Broadcom's initial complaint. According to these appellants, LEOs may only exclude the products of named parties. Broadcom and the Commission maintain that the ITC has authority to order an LEO which excludes all of a respondent's articles that are determined to violate, regardless of the identity of the importer.

The ITC is a creature of statute, and must find authority for its actions in its enabling statute. See Vastfame Camera, Ltd. v. ITC, 386 F.3d 1108, 1112 (Fed. Cir. 2004). Accordingly, this court must examine the Commission's authority under 35

U.S.C. § 1337(d) to issue exclusion orders. This court conducts statutory interpretations in accordance with the framework established by Chevron U.S.A. Inc. v. Nat'l Res. Def. Council, Inc., 467 U.S. 837 (1984). Under Chevron, “a reviewing court must first ask ‘whether Congress has directly spoken to the precise question at issue.’” FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120, 132 (2000) (quoting Chevron, 467 U.S. at 842). “If Congress has done so, the inquiry is at an end; the court ‘must give effect to the unambiguously expressed intent of Congress.’” Id. (quoting Chevron, 467 U.S. at 843). However, if “the statute in question is ambiguous and the agency’s interpretation is reasonable,” “a court must defer to an agency’s construction of a statute governing agency conduct.” Cathedral Candle Co. v. U.S. ITC, 400 F.3d 1352, 1361 (Fed. Cir. 2005).

In order to determine whether the Smoot-Hawley Act or any of its amendments has directly spoken to the precise question at issue, this court must give the terms of that statute their “ordinary, contemporary, common meaning, absent an indication Congress intended them to bear some different import.” Williams v. Taylor, 529 U.S. 420, 431 (2000) (internal quotation marks omitted). This court must “give effect, if possible, to every clause and word of [the] statute.” United States v. Menasche, 348 U.S. 528, 538-39 (1955) (citation omitted). Further, “in expounding a statute, we must not be guided by a single sentence or member of a sentence, but look to the provisions of the whole law, and to its object and policy.” U.S. Nat'l Bank of Or. v. Indep. Ins. Agents of Am., Inc., 508 U.S. 439, 455 (1993) (internal quotation marks omitted).

Section 1337(d) provides, in relevant part:

(d) Exclusion of articles from entry

- (1) If the Commission determines, as a result of an investigation under this section, that there is a violation of this section, it shall direct that the articles concerned, imported by any person violating the provision of this section, be excluded from entry into the United States, unless, after considering the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers, it finds that such articles should not be excluded from entry . . .
- (2) The authority of the Commission to order an exclusion from entry of articles shall be limited to persons determined by the Commission to be violating this section unless the Commission determines that—
- (A) a general exclusion from entry of articles is necessary to prevent circumvention of an exclusion order limited to products of named persons; or
  - (B) there is a pattern of violation of this section and it is difficult to identify the source of infringing products.

19 U.S.C. § 1337(d) (2006) (emphases added).

According to the plain language of the statute, Congress created two distinct forms of exclusion orders: one limited and one general. The default exclusion remedy “shall be limited to persons determined by the Commission to be violating this section.” Id. § 1337(d)(2). By contrast, a “general exclusion” order (“GEO”) is only appropriate if two exceptional circumstances apply. Specifically, under subsection d(2)(A), the Commission may issue a GEO if it is “necessary to prevent circumvention of an exclusion order limited to products of named persons” or, under subsection d(2)(B), if “there is a pattern of violation of this section and it is difficult to identify the source of infringing products.” Id. §§ 1337(d)(2)(A) and (B). By implication, an LEO is both “an order limited to products of named persons,” and one where the complainant has not demonstrated “a pattern of violation of this section and [difficulty in identifying] the source of infringing products.” Thus, on its face, the statutory context limits LEOs to named respondents that the Commission finds in violation of Section 337. The ITC cannot expand its authority from “persons determined by the Commission to be

violating” to “articles manufactured by persons determined by the Commission to be violating.” See Burlington N. R.R. Co. v. Okla. Tax Comm'n, 481 U.S. 454, 463 (U.S. 1987) (“[T]he addition of words to a statutory provision which is complete as it stands . . . would require amendment rather than construction of the statute, and it must be rejected here”). If a complainant wishes to obtain an exclusion order operative against articles of non-respondents, it must seek a GEO by satisfying the heightened burdens of §§ 1337(d)(2)(A) and (B).

Any reading of Section 337(d) that would enable LEOs to exclude articles manufactured by non-respondents would impermissibly render sections of the statute superfluous. Section 337(d)(1) provides that the Commission “shall direct that the articles concerned, imported by any person violating the provision of this section, be excluded from entry into the United States.” 19 U.S.C. § 1337(d)(1) (emphasis added). In a similar vein, Section 337(e)(1) provides preliminary relief for “articles concerned, imported by any person with respect to whom there is reason to believe that such person is violating this section, be excluded from entry into the United States.” Id. § 1337(e)(1) (emphasis added). If, as Broadcom and the ITC argue, an infringing article is excludable under an LEO, regardless of the importer, the language in these sections requiring the importer to be in violation of the statute would be redundant. Those sections could merely state that once the Commission finds any violation to have occurred, it “shall direct that the articles concerned be excluded from entry . . . .” This court, however, must interpret Section 337 to give meaning to all of its clauses. See, e.g., TRW Inc. v. Andrews, 534 U.S. 19, 31 (2001) (“It is a cardinal principle of statutory construction that a statute ought . . . to be so construed that . . . no clause, sentence, or

word shall be superfluous . . . .") (internal quotation marks and citation omitted); Huntleigh USA Corp. v. United States, 525 F.3d 1370, 1382 (Fed. Cir. 2008) ("[T]he words of a statute are not to be rendered superfluous if such a construction can be avoided.").

The Commission and Broadcom argue that Congress could not possibly have intended to limit the effect of LEOs to named respondents, because unnamed, difficult-to-identify importers of infringing articles might escape enforcement through this loophole. To the contrary, this court does not perceive that its ruling today renders Section 337 relief illusory. Rather, the trade law speaks directly to the very concerns voiced by the Commission and Broadcom in Section 337(d)(2). A party concerned about potential "circumvention" of an LEO "limited to products of named persons" or fearing the difficulty of identifying "the source of infringing products" has the option to bring a case under either subsection 337(d)(2)(A) or 337(d)(2)(B). In other words, the trade act has made it clear that a party must meet these heightened requirements before the ITC has authority to issue a general exclusion order against products of non-respondents. See 19 U.S.C. § 1337(d)(2).

Broadcom has a particular difficulty making its argument about the drastic potential consequences of following the statutory requirement of a general exclusion to reach imports beyond those of a respondent. The record in this case shows that the Commission explicitly found that Broadcom knew the identity of the handset manufacturers whose products contain the accused chips. Initial Determination, 2006 ITC LEXIS 803, at \*414. Broadcom thus could have named such manufacturers as respondents to the Section 337 investigation. Further, the Commission found that

Broadcom knew when it filed its complaint that almost all of the accused chips entering the United States were incorporated into handsets by third parties, rather than being imported separately by Qualcomm. Id. Broadcom appears to have made the strategic decision to not name downstream wireless device manufacturers and to not request the ITC to enter a GEO. Thus, Broadcom chose to forego the full advantage of an LEO's statutory scope by not naming known downstream respondents. Broadcom also chose to forego the burden of proving the extra statutory requirements for a GEO. Based on those choices, Broadcom does not stand in the best position to attempt to blur the clear line drawn by the statute between LEOs and GEOs.

The Commission and Broadcom further argue that LEOs are neutral with respect to the importing entity because section 337 exclusion orders are in rem instruments. They point to subsection 337(d)'s title, "Exclusion of articles from entry," and section d(1)'s requirement excluding "articles concerned" from importation (emphases added). According to the Commission and Broadcom, a requirement to name downstream importers as respondents for a LEO impermissibly converts Section 337 into an in personam instrument. To the contrary, the Act plainly constrains the Commission's authority to exclude articles to those of "persons determined by the Commission to be violating this section" without a GEO. 19 U.S.C. § 1337(d)(2). Broadcom and the ITC's desired interpretation ignores the language of 337(d)(2), which incorporates the in personam element.

This court's decision in Hyundai Electronics Industries Co. v. United States ITC, 899 F.2d 1204 (Fed. Cir. 1990), does not suggest that LEOs may cover downstream products of non-respondents. In Hyundai, this court affirmed an ITC "limited exclusion

order” that excluded both infringing memory devices and downstream products that contained those memory devices. Id. at 1209. However, in Hyundai, the downstream products affected by the ITC’s order were “Hyundai computers, computer peripherals, telecommunications equipment, and automotive electronic equipment containing infringing [memory devices].” Id. at 1206. Thus, in approving such an LEO, this court did not address the Commission’s authority to exclude downstream products of third parties. The only downstream products affected by the ITC’s LEO were those of the sole adjudged violator of section 337, namely, Hyundai.

Indeed, this court has consistently honored the Act’s distinction between limited and general exclusion orders. For example, this court has held that LEOs “only apply to the specific parties before the Commission in the investigation.” Fuji Photo Film Co. v. ITC, 474 F.3d 1281, 1286 (Fed. Cir. 2007). By contrast, GEOFs “bar the importation of infringing products by anyone, regardless of whether they were a respondent in the Commission’s investigation.” Id.; see also Vastfame Camera, Ltd. v. ITC, 386 F.3d 1108, 1114 (Fed. Cir. 2004) (“A general exclusion order broadly prohibits entry of articles that infringe the relevant claims of a listed patent without regard to whether the persons importing such articles were parties to, or were related to parties to, the investigation that led to issuance of the general exclusion order.”).

This court notes as well: regardless of the limitations within Section 337 on LEOs, the Commission’s downstream order in this case would be ultra vires. The ITC’s June 7, 2007 LEO identifies the excluded downstream articles as, e.g., “[h]andheld wireless communications devices . . . containing Qualcomm baseband processor chips or chipsets that are programmed to enable the power saving features covered by claims

1, 4, 8, 9, or 11 of U.S. Patent No. 6,714,983.” Qualcomm does not manufacture these finished articles. Indeed, the ITC found a Section 337 violation solely based on an inducement theory, rejecting Broadcom’s argument that Qualcomm directly infringes the ’983 Patent. Thus, even if LEOs could exclude beyond the limits of listed respondents, the order would still be limited to downstream articles manufactured by a person found to be violating the statute (here, Qualcomm). The Commission would lack authority to exclude devices manufactured by anyone other than Qualcomm. The ITC seems to miss its own factual conclusion that Qualcomm is not a manufacturer of infringing programmed chips. Therefore, the ITC’s attempt to fashion a GEO that poses as an LEO fails even under the ITC’s erroneous interpretation of Section 337.

In summary, Section 337 permits exclusion of the imports of non-respondents only via a general exclusion order, and then too, only by satisfying the heightened requirements of 1337(d)(2)(A) or (B). The statute permits LEOs to exclude only the violating products of named respondents. Because the Act speaks unambiguously to the precise question at issue in this case, the Chevron inquiry is at an end. This court must simply “give effect to the unambiguously expressed intent of Congress.” Chevron, 467 U.S. at 843.

Because the Commission did not issue a GEO under either of the two statutory exceptions in 19 U.S.C. § 1337(d)(2), the Act prevents the Commission from issuing a limited exclusion order that excludes products of those who are not “persons determined . . . to be violating [Section 337].” Accordingly, this court vacates the ITC’s exclusion order. On remand, the Commission can reconsider its enforcement options.

## CONCLUSION

This court affirms the ITC's claim construction and determination of validity, both as to anticipation and obviousness. Further, this court vacates and remands the finding of liability based on the ITC's erroneous application of the legal standard for induced infringement. Finally, this court vacates and remands the exclusion order fashioned by the Commission because Section 337 unambiguously limits the ITC's exclusionary authority to persons named by the complainant.

## COSTS

Each party shall bear its own costs.

AFFIRMED-IN-PART, VACATED-AND-REMANDED-IN-PART.