United States Court of Appeals for the Federal Circuit

TECSEC, INC., Plaintiff-Appellant,

v.

INTERNATIONAL BUSINESS MACHINES CORPORATION AND EBAY INC., Defendants,

AND

CISCO SYSTEMS, INC., SAS INSTITUTE, INC., SUN MICROSYSTEMS, INC. (now known as Oracle America, Inc.), ORACLE CORPORATION, AND PAYPAL, INC., Defendants-Appellees,

AND

SAP AMERICA, INC., SAP AG, AND SYBASE, INC., Defendants-Appellees

AND

SOFTWARE AG AND SOFTWARE AG, INC., Defendants-Appellees,

AND

ADOBE SYSTEMS, INC., Defendant-Appellee.

2012-1415

Appeal from the United States District Court for the Eastern District of Virginia in No. 10-CV-0115, Judge Leonie M. Brinkema.

Decided: October 2, 2013

MICHAEL A. OAKES, Hunton & Williams, LLP, of Washington, DC, argued for plaintiff-appellant. With him on the brief was MICHAEL A. O'SHEA. Of counsel on the brief was GREGORY N. STILLMAN, of Norfolk, Virginia. Of counsel was ADAM PRICE and ANDREW DINOVO, DiNovo, Price Ellwanger & Hardy, LLP, of Austin, Texas.

STEVEN C. CHERNY, Kirkland & Ellis, LLP, of Washington, DC, argued for defendants-appellees, Cisco Systems, Inc., et al. With him on the brief were MICHAEL W. DE VRIES, of Los Angeles, California, and JOHN C. O'QUINN, of Washington, DC; JEFFREY K. SHERWOOD and MEGAN S. WOODWORTH, Dickstein Shapiro LLP, of Washington, DC, for defendants-appellees, SAP AG, et al; MICHAEL W. ROBINSON and JEFFRI A. KAMINSKI, Venable LLP, of Vienna, Virginia, for defendants-appellees, Software AG, et al; and HENREY C. BUNSOW and CHRISTINA M. FINN, Bunsow, De Mory, Smith & Allison, LLP, of San Francisco, California, for defendant-appellee, Adobe Systems, Inc. Of counsel was WILLIAM G. BURGESS, Kirkland & Ellis, LLP, of Washington, DC. Before MOORE, LINN, and REYNA, Circuit Judges.

Opinion for the court filed by *Circuit Judge* LINN.

Dissenting opinion filed by *Circuit Judge* REYNA.

LINN, Circuit Judge.

TecSec, Inc. appeals from the district court's entry of judgment that the defendant-appellees (the "defendants") do not infringe various claims of three TecSec patents: U.S. Patent Nos. 5,369,702 (the "702 Patent"); No. 5,680,452 (the "452 Patent"); and No. 5,898,781 (the "781 Patent"). Because the district court incorrectly construed the claims, this court *affirms-in-part*, *reverses-in-part*, and *remands* for further proceedings.

BACKGROUND

This case relates to methods and systems that secure computer data. The '702, '452, and '781 Patents derive from a common parent application and disclose a method and a system for providing security in a data network by nesting encrypted objects into other objects which are also encrypted. '702 Patent col. 4. ll. 25–28. This allows a system to employ different security levels to restrict access to specific compartments of data. *Id*.

Claim 8 of the '702 Patent is representative of the system claims at issue:

A system for providing *multi-level multimedia security* in a data network, comprising:

A) *digital logic means*, the digital logic means comprising:

1) a system memory means for storing data;

2) an encryption algorithm module, comprising logic for converting unencrypted objects into encrypted objects, the encryption algorithm module being electronically connected to the system memory means for accessing data stored in the first system memory;

3) an object labelling subsystem, comprising logic means for limiting object access, subject to label conditions, the object labelling subsystem being electronically connected to the system memory means for accessing data stored in the system memory means and the object labelling subsystem being further electronically connected to the encryption algorithm module to accept inputs from the encryption algorithm module;

4) a decryption algorithm module, comprising logic for converting encrypted objects into unencrypted objects, the decryption algorithm module being electronically connected to the system memory means for accessing data stored in the system memory means; and

5) an object label identification subsystem, comprising logic for limiting object access, subject to label conditions, the object label identification subsystem being electronically connected to the system memory means for accessing data stored in the system memory means and the object label identification subsystem being further electronically connected to the decryption algorithm module to accept inputs from the decryption algorithm module;

B) the encryption algorithm module working in conjunction with the object labelling subsystem to create an encrypted object such that the object label identification subsystem limits access to an encrypted object.

'702 Patent col. 12 l. 45-col. 13 l. 13 (emphases added). The parties dispute the construction of the phrase "multilevel multimedia security," which appears in every asserted claim. The parties also dispute a number of limitations in the '702 Patent drafted in means-plus-function format, including the terms "digital logic means" and "system memory means" recited in independent claim 8, and fourteen other means-plus-function limitations in dependent claims 9, 12, 14, and 15.

TecSec filed suit in the Eastern District of Virginia, alleging that the defendants' internet servers and related software products infringed. In addition to the defendants, TecSec also alleged infringement by International Business Machines Corp. ("IBM"). Early in the case, the district court severed TecSec's claims against IBM and stayed proceedings against the defendants. It considered the cross-motions relating to infringement, ultimately granting IBM's motion for summary judgment of noninfringement. See TecSec, Inc. v. Int'l Bus. Machs. Corp., 769 F. Supp. 2d 997 (E.D. Va. 2011) ("Summary Judgment Order"). In granting summary judgment, the court held that TecSec failed to produce any evidence that IBM itself ever performed every step of the asserted method claims or ever made, used, sold or offered for sale within the United States, or imported into the United States, any products containing all of the limitations of the asserted system claims. Because IBM was selling software and because the claims required both hardware and software, the district court ruled as a matter of law that TecSec failed to present a triable issue of fact that IBM's software contained every limitation of any asserted claim. The court also found insufficient evidence of indirect infringement. Both of those conclusions were independent of the present disputes about claim construction. As an alternate ground, the district court construed the claims and concluded, again as a matter of law, that TecSec failed to show that IBM's accused software met the relevant limitations of the claims as construed. The court entered final judgment in IBM's favor pursuant to Federal Rule of Civil Procedure 54(b). *See id.* at 1028.

TecSec appealed, challenging the district court's claim construction as well as its conclusion that TecSec failed to prove infringement by IBM. This court affirmed the district court's judgment without opinion pursuant to Federal Circuit Rule 36. *TecSec, Inc. v. Int'l Bus. Machs. Corp.*, 466 F. App'x 882 (Fed. Cir. 2012) (the "*IBM* appeal").

On remand, proceedings resumed as to the defendants that remained. TecSec then stipulated that it could not prove infringement by defendants under the claim construction adopted by the district court during the proceedings with IBM. Based on TecSec's stipulation, the district court entered judgment of noninfringement as to the defendants. *TecSec, Inc. v. Int'l Bus. Machs. Corp.*, No. 1:10-cv-00115-LMB/TCB (E.D. Va. Apr. 24, 2012). TecSec appeals. This court has jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

The parties agree that claim construction is a legal issue that this court reviews *de novo* on appeal. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455–56 (Fed. Cir. 1998) (en banc). To ascertain the scope and meaning of the asserted claims, this court looks to the words of the claims themselves, the specification, the prosecution history, and, lastly, any relevant extrinsic evidence. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315–17 (Fed. Cir. 2005) (en banc). Whether claim language invokes § 112, ¶ 6 is an exercise of claim construction and is therefore a question of law, subject to *de novo* review. *Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n,* 161 F.3d 696, 702 (Fed. Cir. 1998). "If § 112 ¶ 6 is applicable, the determination of the corresponding structure is also a question of law." *Linear Tech. Corp. v. Impala Linear Corp.,* 379 F.3d 1311, 1318 (Fed. Cir. 2004).

We interpret our own mandate *de novo. Laitram Corp. v. NEC Corp.*, 115 F.3d 947, 950 (Fed. Cir. 1997). The application of general collateral estoppel principles is an issue of regional circuit law. *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 435 F.3d 1356, 1360 (Fed. Cir. 2006). The Fourth Circuit reviews *de novo* the application of collateral estoppel. *Tuttle v. Arlington Cty. Sch. Bd.*, 195 F.3d 698, 703 (4th Cir. 1999).

I. Claim Construction

On appeal, the parties dispute whether TecSec may reargue the claim constructions arrived at by the district court during the proceeding with IBM and that were at issue, *inter alia*, in the *IBM* appeal. The parties did not raise this issue below, and the district court did not pass on the issue.

The district court made several rulings in granting IBM's motion for summary judgment. First, the court construed a number of claim terms. *Summary Judgment Order*, 769 F. Supp. 2d at 1003–09. The court then addressed TecSec's direct infringement claims, ruling in IBM's favor for two reasons, neither dependent on rejecting TecSec's constructions of the claim terms at issue here: (1) TecSec "failed to come forward with any evidence that IBM itself performed any of the steps of the method claims"; and (2) TecSec failed to adduce any evidence that IBM "made, used, sold, offered for sale, or imported" the

entire accused system. Id. at 1010-12. The court next turned to TecSec's indirect infringement claims and, again without reliance on rejecting TecSec's constructions of the claim terms at issue here, determined that TecSec: (1) "failed to present even a single instance of a customer using the accused IBM products in an allegedly infringing manner"; and (2) failed to provide any evidence that IBM possessed the requisite mental state to support a claim of induced or contributory infringement. Id. at 1013–16. Based on these failures of proof, the district court concluded that summary judgment in favor of IBM on TecSec's direct and indirect infringement claims was in order. As an alternative basis for ruling in favor of IBM, the district court went on to conclude that TecSec also had failed to show that IBM's accused systems met the limitations of the asserted claims under the court's claim construction. Id. at 1016–22. On appeal from these rulings, TecSec challenged the district court's determinations of: (1) no direct or indirect infringement based on TecSec's failure of proof; and (2) its failure to show that IBM's systems met the claim limitations, as they properly should have been construed. We affirmed the district court's judgment without opinion pursuant to Rule 36. The defendants now assert that, under the mandate rule and the doctrine of collateral estoppel, our Rule 36 judgment precludes TecSec from re-raising its claim construction arguments.

A. Mandate Rule

The defendants argue that the mandate rule applies because: (1) the district court's constructions were within the scope of its judgment; (2) that judgment was affirmed in the *IBM* appeal; and (3) no issues were reserved for further consideration in the decision in the prior appeal. TecSec responds that the mandate rule does not apply because it is impossible to glean which issues this court decided when we issued the Rule 36 judgment. This court agrees with TecSec that the mandate rule does not bar it from challenging the district court's claim construction. After our mandate issues, the mandate rule "forecloses reconsideration of issues implicitly or explicitly decided on appeal." *Amado v. Microsoft Corp.*, 517 F.3d 1353, 1364 (Fed. Cir. 2008). For an issue to be implicitly decided, it must be "decided by *necessary* implication." *Laitram*, 115 F.3d at 951. Moreover, in interpreting this court's mandate, "both the letter and the spirit of the mandate must be considered." *Engel Indus., Inc. v. Lockformer Co.*, 166 F.3d 1379, 1383 (Fed. Cir. 1999).

The Rule 36 judgment in the *IBM* appeal summarily affirmed the district court's judgment that IBM did not directly or indirectly infringe TecSec's patents. The district court's judgment was based on two independent grounds. The district court first ruled as a matter of law that TecSec's direct and indirect infringement claims failed for failure of proof that IBM *itself* or any of its customers performed every claimed step or made, used, sold, offered for sale, or imported any system containing all of the limitations of the asserted claims. As the district court stated in its opinion, without questioning TecSec's construction of the terms now at issue, "TecSec has utterly failed to come forward with any evidence that IBM itself performed any of the steps of the method claims," and "even if some user-implemented system were to meet all of the asserted claim limitations—which, as explained below it cannot . . . —TecSec has provided no evidence that *IBM* ever made, used, sold, offered to sell, or imported that entire claimed system" Summary Judgment Order, 769 F. Supp. 2d at 1010, 1012 (first emphasis added). The district court drew a similar conclusion regarding indirect infringement, as to which it found, as well, insufficient proof of the required intent. Given the absence of evidence that any steps were performed by IBM or that an entire claimed hardware/software system was ever made, used, sold, offered

to sell, or imported by IBM or its customers, the district court was compelled to find no direct or indirect infringement. Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 949-50 (Fed. Cir. 1987) (en banc) ("Every Supreme Court decision which has addressed the issue of infringement of a patent claim, beginning with *Prouty v. Draper*, 41 U.S. (16 Pet.) 335, 10 L.Ed. 985 (1842)—and the precedent is voluminous—has held that where a part of the claimed invention, that is, a limitation of the claim, is lacking in the accused device exactly or equivalently, there is no infringement.") The district court, in finding a complete failure of proof regarding any act of infringement by IBM or its customers, did not rely on any rejection of TecSec's constructions of the terms at issue here. Indeed, IBM represented to the court that we could affirm the district court's judgment solely based on TecSec's "complete failure of proof" and did not "need to get to claim construction." TecSec, Inc. v. Int'l Bus. Machs. Corp., No. 2011-1303, Oral Arg. at 19:30–24:55, available at

http://oralarguments.cafc.uscourts.gov/default.aspx?fl=20 11-1303.mp3. While the district court also ruled in the alternative that TecSec failed to show that IBM's software met various claim limitations, as construed, our Rule 36 decision does not articulate a basis for affirmance, let alone an explication on claim construction. On this record, it cannot be concluded simply on the basis of this court's summary affirmance that we expressly or by necessary implication decided the claim construction issues in the *IBM* appeal.¹

¹ The dissent boldly contends that "[c]laim construction and sufficiency of the evidence showing an act of infringement are not alternative grounds on which to find noninfringement," Dissent at 6, both: (a) ignoring the distinctions between failures of proof and conventional rules of infringement, and (b) overlooking the actual

The Supreme Court's analysis of its summary disposition procedure is instructive. The Court has explained that its summary dispositions "affirm[] only the judgment of the court below, and no more may be read into [its] action than was essential to sustain that judgment." *Ill. State Bd. of Elections v. Socialist Workers Party*, 440 U.S. 173, 182–83 (1979) (internal citations omitted). Thus, when the Supreme Court by summary disposition affirms a decision that rested on multiple grounds, the affirmance is generally not binding precedent for either ground. See Akron v. Akron Ctr. for Reproductive Health, Inc., 462 U.S. 416, 433 n.18 (1983).

Similarly, our Rule 36 judgments only affirm the judgment of the lower tribunal. "[A] Rule 36 judgment simply confirms that the trial court entered the correct judgment. It does not endorse or reject any specific part of the trial court's reasoning." *Rates Tech., Inc. v. Mediatrix Telecom, Inc.*, 688 F.3d 742, 750 (Fed. Cir. 2012). Had claim construction been the only issue in the *IBM* appeal, and had that claim construction been essential to sustaining the judgment of noninfringement, the preclusive effect of our Rule 36 judgment would have been undeniable. But that was not the case. Here, the mandate rule does not preclude TecSec from challenging claim construction.

B. Collateral Estoppel

The defendants also argue that collateral estoppel precludes TecSec from re-litigating claim construction. They point out that the district court construed claim terms that it considered "strictly necessary" to the grant of summary judgment. See Summary Judgment Order, 769 F. Supp. 2d at 1003. The defendants argue that given

rulings of the district court on the evidentiary record before it during the IBM phase of this case. the determination by the district court that the construed terms were "strictly necessary" to its ruling that the claim limitations were not met, the existence of alternative grounds to support the judgment does not deprive the judgment of preclusive effect.

TecSec responds by arguing that collateral estoppel does not apply because the district court's claim constructions were not necessary to the final judgment, which rested on multiple, independent grounds. TecSec argues that, because this court could have affirmed on any ground, claim construction was not actually determined in the *IBM* appeal and was not necessary to this court's Rule 36 affirmance.

We agree with TecSec that the defendants have failed to show that collateral estoppel applies in this case. Among other elements, the party that seeks to invoke collateral estoppel must show that the litigated issue was "actually determined in the prior proceeding" and was a "critical and necessary part of the decision in the prior proceeding." *Collins v. Pond Creek Mining Co.*, 468 F.3d 213, 217 (4th Cir. 2006). A corollary to this requirement is "where the court in the prior suit has determined two issues, either of which could independently support the result, then neither determination is considered essential to the judgment." *Ritter v. Mount St. Mary's Coll.*, 814 F.2d 986, 993 (4th Cir. 1987); *see also C.B. Marchant Co. v. E. Foods, Inc.*, 756 F.2d 317, 319 (4th Cir. 1985).

Here, we affirmed without opinion the district court's judgment of noninfringement. As recounted above, the district court's judgment was independently predicated on alternative grounds: TecSec's failure of proof as to IBM's and its customers' acts and as to IBM's intent, and its failure to show that IBM's software met certain limitations of the claims, as construed. The former ground was not and is not dependent on any claim construction. Even

though the district court stated that its claim constructions were "strictly necessary" to resolving the parties' summary judgment motions, the judgment based on TecSec's failure of proof was independent of the court's construction. Because claim construction was neither actually determined by nor critical and necessary to our summary affirmance in the *IBM* appeal, collateral estoppel does not preclude the present challenge.

The Defendants contend, however, that TecSec still should not be heard because it is re-raising the same claim construction arguments in the same proceeding. Relying on *Ritter*, they argue that collateral estoppel applies to the district court's alternative holdings in this circumstance because otherwise the district court's rulings would become irrelevancies.

We disagree. In *Ritter*, the district court issued two factual findings, and the plaintiff appealed. 814 F.2d at 988, 993. The appellate court upheld one of the fact findings but did not address the second finding. *Id*. The court then reversed and remanded, concluding that the district court erred in dismissing some of the plaintiff's related civil-rights claims. *Id*.

The plaintiff's civil-rights claims required proof of the same underlying facts that were at issue in the first trial. *Id.* at 993–94. On remand, the district court held that the plaintiff could not re-litigate both fact findings, and the court of appeals affirmed. *Id.* The court held that even though its prior decision only mentioned the first fact finding, to allow re-litigation of the second fact finding in the same case against the same defendant "would constitute an abandonment of serious judicial reasoning and decision-making in exchange for the wooden application of judge-made rules designed to protect litigants in circumstances where they need protection." *Id.* at 994.

We decline to extend *Ritter* to the facts of this case. The Fourth Circuit has recognized that *Ritter* "essentially appl[ied] a law-of-the-case principle" to hold that collateral estoppel should apply in that case. In re Microsoft Antitrust Litig., 355 F.3d 322, 328 (4th Cir. 2004). For the reasons underlying our decision that the mandate rule does not apply in this case, we conclude that the law of the case doctrine does not bar TecSec from rearguing claim construction in this appeal. See Tronzo v. Biomet, Inc., 236 F.3d 1342, 1348 n.1 (Fed. Cir. 2001) (explaining that the law of the case doctrine is a "corollary to the mandate rule") (citing United States v. Polland, 56 F.3d 776, 779 (7th Cir. 1995)). Moreover, unlike *Ritter*, our Rule 36 judgment did not address any of the issues ruled on below that TecSec had appealed. We did not endorse or reject any of the district court's specific holdings. For collateral estoppel to apply to a court's claim construction, the construction "had to be the reason for the loss," Jackson Jordan, Inc. v. Plasser Am. Corp., 747 F.2d 1567, 1577 (Fed. Cir. 1984), a conclusion that does not apply here. We thus decline to hold that collateral estoppel applies in this case.

II. Construction of "Multi-Level Multimedia Security"

The parties dispute the construction of the term "multi-level multimedia security." That term appears in every asserted claim.

The district court ruled that the term requires "multiple layers of encryption" because TecSec defined the term during prosecution and the specification repeatedly describes that the method encrypts an object and then nests or embeds that object within other encrypted objects. *Summary Judgment Order*, 769 F. Supp. 2d at 1003–09. The court also concluded that the term was limited to securing multimedia information and construed the term "multimedia" as "a computer technology that displays information using a combination of full-motion video, animation, sound, graphics and text with a high degree of user interaction." *Id.* at 1008–09. The court concluded that the patentee had advocated for this definition during prosecution. *Id.*

A. Multiple Layers of Encryption

TecSec argues that the district court erroneously required multiple layers of encryption because the term "security" is broader than "encryption" and encompasses access control. TecSec specifically asserts that the claim language does not require multiple layers of encryption because claim 1 recites encrypting a single object, not multiple objects, and dependent claim 3 recites encrypting multiple objects. TecSec argues that the specification discloses embodiments in which the method utilizes one layer of encryption to secure data.

The defendants respond that the district court correctly required multiple layers of encryption. They contend that the inventors explained in prosecution that "multilevel security" refers to encrypted objects that may be "nested within other objects which are also encrypted." J.A. 427, 436; '702 Patent col. 4 ll. 25–28. They argue that TecSec's claim differentiation argument fails because the court's construction does not render any claims superfluous—the dependent claims that require two levels of encryption also require selecting a second label. They assert that the specification only discloses encrypted data contained within an encrypted container.

We are not persuaded by TecSec's arguments. It may be true that the ordinary meaning of "multi-level" security is not limited to two layers of encryption but can encompass one level of encryption coupled with a second layer of security, such as access control. And TecSec is correct that the asserted patents disclose encryption and password protection as different types of security. *E.g.*, '702 Patent col. 1 ll. 32-35, ll. 46-48 (disclosing encryption and password protection).

But the prosecution history mandates a narrower con-During prosecution, the PTO rejected the struction. claims because the term "multi-level multimedia security" was "unclear." J.A. 434. In response, the inventor amended the specification and explained that the invention achieves "multi-level multimedia security" in two ways: (1) it achieves "multi-level security" because "encrypted objects may be nested within other objects which are also encrypted"; and (2) it achieves "multimedia security" because the "objects are encrypted." J.A. 427; see also '702 Patent col. 4 ll. 25-34. "Thus, the nesting of individually encrypted objects provides security that is multi-level and multimedia." J.A. 427; see also '702 Patent col. 4 ll. 32-34. Through these statements the inventor defined the term "multi-level multimedia security" to require multiple layers of encryption.

This definition of the term "multi-level multimedia security" is sufficient to overcome TecSec's claim differentiation argument. Claim differentiation is not a rigid rule and it cannot overcome a construction required by the prosecution history. *Regents of Univ. of Cal. v. Dakocytomation Cal., Inc.*, 517 F.3d 1364, 1375 (Fed. Cir. 2008). Here, the inventor's definition of "multi-level multimedia security" governs. Thus, the district court correctly construed "multi-level multimedia security" as requiring multiple layers of encryption.

B. Multimedia Objects

TecSec argues that the court erroneously construed "multimedia" as a noun identifying the types of objects that may be encrypted, rather than an adjective describing the type of security that the invention employs. It contends that the claims and specification show that security can be applied to any "object," regardless of the media type.

The defendants assert that the inventor defined the term during prosecution when he referred to a dictionary definition of "multimedia." Thus, the defendants contend that the district court correctly construed the claims when it simply adopted the inventor's definition.

We agree with TecSec that the court erred when it limited the encrypted data to objects in multimedia form. The ordinary meaning of "multi-level multimedia security" relates to the type of "security" employed and does not limit the type of data that may be encrypted. Indeed, the claims and specification convey that any type of data may be encrypted, not just multimedia. *E.g.*, '702 Patent claim 1, col. 3 l. 42–col. 4 l. 34. For example, the specification describes the encrypting and decrypting of text, memos, letters, spreadsheets, and sound. *Id.* col. 3 l. 58– col. 4 l. 22, col. 7 l. 63–col. 11 l. 11.

The prosecution history of the '702 Patent does not limit the claims to the encryption and decryption of multimedia data. "[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable." Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1325–26 (Fed. Cir. 2003). The prosecution history at issue here does not rise to that level.

During prosecution, the inventor explained that the portion he added to the specification relating to multilevel encryption described "multi-level multimedia security." J.A. 435. He also cited to a dictionary for the proposition that those terms—"multi-level," "multimedia," and "security"—were well known in the art. *Id.* He did not argue that the dictionary definition showed that "multimedia security" required encryption of multimedia objects. Nor did the inventor characterize his claims as limited to encrypting multimedia objects. He did not distinguish his invention from the prior art on that basis. In these circumstances, we cannot say that the inventor clearly and unmistakably limited his claims to encrypting multimedia objects. Thus, we hold that the district court erred when it limited the term "multi-level multimedia security" to require that secured data be multimedia data.

* * * * *

The term "multi-level multimedia security" requires multiple levels of encryption but is not limited to securing only multimedia objects. Based on the parties' stipulation, TecSec may be able to prove infringement against every defendant except PayPal. J.A. 2640, 2645–46. Thus, we affirm the court's noninfringement judgment as to PayPal but otherwise reverse the court's summary judgment of noninfringement and remand for further proceedings.

III. Construction of Means-Plus-Function Limitations

The parties' dispute relates to sixteen claim limitations that employ the term "means." The district court treated these limitations as 35 U.S.C. § 112, ¶ 6 expressions and held that TecSec failed to identify corresponding structure for any of these limitations. Summary Judgment Order, 769 F. Supp. 2d at 1020–22. It concluded that none of the "structure" that TecSec pointed to was sufficient to perform any of the recited functions and that TecSec could not prove infringement as a matter of law. Id. We discuss these limitations below.

A. System Memory Means and Digital Logic Means

TecSec argues that the district court erred when it concluded that the terms "system memory means" and "digital logic means" were means-plus-function limitations. It argues that both terms recite sufficient structure to avoid treatment under § 112, ¶ 6 because "system memory" is a structural element and the claim provides that the "digital logic means" comprises specific structures, including "a system memory means," two "subsystems," and two "modules."

The defendants argue that the district court correctly concluded that the "system memory means" and the "digital logic means" are means-plus-function limitations. They argue that a "system memory means" invokes $\S 112$, ¶ 6 because a "system memory" is insufficient structure to overcome the presumption that the term is a means-plus-function limitation. Similarly, they argue that the "digital logic means" is a means-plus-function limitation because the "modules," "systems," and "means" recited in the claim are generic structures.

We agree with TecSec that the "system memory means" and the "digital memory means" do not invoke § 112, ¶ 6. The use of the term "means" triggers a rebuttable presumption that § 112, ¶ 6 applies. *TriMed, Inc. v. Stryker Corp.*, 514 F.3d 1256, 1259 (Fed. Cir. 2008). One way in which this presumption can be overcome is if "the claim recites sufficient structure for performing the described functions in their entirety." *Id.* To determine if the claim recites sufficient structure, "it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function." *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1359–60 (Fed. Cir. 2004). A "system memory" is sufficient structure to perform the "storing data" function. To those skilled in the art, a system memory is a specific structure that stores data. Consistent with this understanding, for example, the specification discloses a computer that contains random access memory (RAM) to store data. '720 Patent col. 7 l. 37 (disclosing a "486 50 MHz DX" computer system with "16 megabytes of RAM").

The defendants rely on *Chicago Board Options Exchange v. International Securities Exchange*, 677 F.3d 1361, 1367 n.1 (Fed. Cir. 2012), in arguing that a "system memory means" can be a means-plus-function limitation. This argument fails for two reasons.

First, we did not hold in *Chicago Board* that a "system memory means" was a means-plus-function limitation. Instead, we held that the patentee had waived its right to argue that a "system memory" was sufficient structure to avoid the application of § 112, ¶ 6 because "[t]he parties expressly agreed during claim construction that 'system memory means' is a means-plus-function limitation." *Chicago Board*, 677 F.3d at 1366–67. We then noted that "[e]ven if this argument was not waived, the presumption that 'system memory means' is a means-plus-function limitation is not overcome." *Id.* at 1366–67 n.1. This statement was not a holding; it was expressly dictum and thus not binding. *Zoltek Corp. v. United States*, 672 F.3d 1309, 1319–20 (Fed. Cir. 2012).

Second, the "system memory means" at issue in *Chicago Board* performed a more specific function than simply storing data. It required the system memory means to "stor[e] allocating parameters for allocating trades between the incoming order or quotation and the previously received orders and quotations." *Chicago Board*, 677 F.3d at 1365. The sufficient structure inquiry focuses on whether the claim recites sufficient structure

to perform "the functions in question." *TriMed*, 514 F.3d at 1260. Here, it is beyond question that those of skill in the art would understand that a system memory is sufficient structure to perform the general function of "storing data." Accordingly, we hold that the district court erred when it concluded that the term "system memory means for storing data" was a means-plus-function limitation.

The term "digital logic means" is also not subject to § 112, ¶ 6. As an initial matter, the claims do not recite a function for the digital logic means to perform. Claim 8 of the '702 Patent simply recites a "digital logic means, the digital logic means comprising" a number of claim elements. In addition, the term "digital logic" designates structure to skilled artisans—namely digital circuits that perform Boolean algebra. The claim also recites that the digital logic means is comprised of structural elements, including a system memory and specific modules and subsystems. While the defendants assert that those elements are purely generic, we see no reason to hold that those elements are so devoid of structure as to implicate § 112, ¶ 6. Thus, the district court erred when it held that the term "digital logic means" was a means-plus-function limitation.

B. Computer-Implemented Means-Plus-Function Terms

TecSec argues that the district court erred when it concluded that the fourteen other means-plus-function terms in the asserted claims of the '702 Patent lacked sufficient corresponding structure in the specification. These terms all recite computer-implemented functions in the overall claimed system. For example, claim 12 requires a "means for selecting an object to encrypt." TecSec contends that Examples 1–3 in the specification disclose specific software applications and describe how these software applications operate to perform the recited functions. The defendants respond that the district court correctly concluded that the computer-implemented means-plusfunction terms lack corresponding structure in the specification. They contend that the software programs recited in the specification are not sufficient to perform the recited functions because they are generic disclosures of software, not specific algorithms to implement the claimed functions.

We agree with TecSec that the specification discloses sufficient corresponding structure for the computerimplemented means-plus-function limitations. The parties agree that for these limitations to avoid indefiniteness, the specification must disclose a special purpose computer as corresponding structure—*i.e.*, a computer programmed to perform a disclosed algorithm. Ergo Licensing, LLC v. CareFusion 303, Inc., 673 F.3d 1361, 1364–65 (Fed. Cir. 2012). We allow a patentee to express an algorithm "in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure." Finisar Corp. v. DirecTV Grp., Inc., 523 F.3d 1323, 1340 (Fed. Cir. 2008) (internal citation omitted). However, "[s]imply reciting 'software' without providing some detail about the means to accomplish the function is not enough." Id. at 1340–41. The party alleging that the specification fails to disclose sufficient corresponding structure must make that showing by clear and convincing evidence. Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1380–81 (Fed. Cir. 2001).

The defendants have failed to show by clear and convincing evidence that the '702 Patent specification fails to disclose corresponding structure for the fourteen computer-implemented means-plus-function limitations. The specification discloses the specific software products and how to use those products to implement the claimed functions, which include "selecting an object to encrypt," "selecting an encryption algorithm," and "encrypting the object," among others.

The specification provides three examples of using the software to perform these functions. The first example describes securing an object in a word processor application such as WordPerfect® or Microsoft Word® using an Object-Oriented Key Manager (OOKeyMan), which is a specific stand-alone application in Microsoft Windows[®]. '702 Patent col. 6 ll. 40–46, col. 7 l. 62–col. 9 l. 4. The example describes how a user interacts with the software applications to cause them to select an object to encrypt, select a label for the object, select an encryption algorithm, encrypt the object, and label the encrypted object. Id. col. 7 l. 63–col. 8 l. 37. The example then details how the software determines if the user is authorized to view the object and, if so, decrypts the object. Id. col. 8 l. 37col. 9 l. 3. While the details of the example focus on the encryption and labeling of a single object, the specification explains that the example "shows the ability for OOKeyMan to securely manage and track single or multiple embedded encrypted objects within other encrypted objects." Id. col. 7 ll. 50-52. The second and third examples show how the OOKevMan software manages and tracks encrypted objects that may be transmitted between different applications, such as between WordPerfect® and Microsoft Word®. Id. col. 7 ll. 54-61, col. 9 l. 4-col. 11 l. 11.

The defendants contend that these examples only disclose generic software and not a specific algorithm. We disagree. It is true that "black box" disclosures of software are often too generic to provide corresponding structure for computer-implemented means-plus-function limitations. *E.g., Blackboard, Inc. v. Desire2Learn Inc.,* 574 F.3d 1371, 1383 (Fed. Cir. 2009) ("The ACM is essentially a black box that performs a recited function. But how it does so is left undisclosed."); *ePlus, Inc. v. Lawson* Software, Inc., 700 F.3d 509, 518 (Fed. Cir. 2012) (holding that "black box" labeled "Purchase Orders" was insufficient structure to perform the "generate purchase orders" function). But the examples here provide detailed prose that shows how the specific software products operate to implement the claimed functions. "This court does not impose a lofty standard in its indefiniteness cases." *Finisar*, 523 F.3d at 1341. Short of providing source code, it is difficult to envision a more detailed disclosure. Accordingly, we reverse the district court's conclusion that the '702 Patent specification failed to provide sufficient structure corresponding to these means-plus-function limitations.

CONCLUSION

We have considered the parties' remaining arguments and have found them unpersuasive. For the foregoing reasons, the district court's judgment is

AFFIRMED-IN-PART, REVERSED-IN-PART, AND REMANDED

COSTS

Each party shall bear its own costs.

United States Court of Appeals for the Federal Circuit

TECSEC, INC., Plaintiff-Appellant,

v.

INTERNATIONAL BUSINESS MACHINES CORPORATION AND EBAY INC., Defendants,

AND

CISCO SYSTEMS, INC., SAS INSTITUTE INC., SUN MICROSYSTEMS, INC. (now known as Oracle America, Inc.), ORACLE CORPORATION, AND PAYPAL, INC., Defendants-Appellees,

AND

SAP AMERICA, INC., SAP, AG, AND SYBASE, INC., Defendants-Appellees,

AND

SOFTWARE AG and SOFTWARE AG, INC., Defendants-Appellees,

AND

ADOBE SYSTEMS, INC., Defendant-Appellee.

2012 - 1415

Appeal from the United States District Court for the Eastern District of Virginia in No. 10-CV-0115, Judge Leonie M. Brinkema.

REYNA, Circuit Judge, dissenting.

This case raises an important issue concerning the court's practice of issuing judgments pursuant to Federal Circuit Rule 36 ("Rule 36").

The majority concludes that the district court misconstrued various claim terms from three TecSec, Inc. patents. It reaches this conclusion notwithstanding that the same claim terms, same constructions, same arguments, and same summary judgment order were previously before this court and reviewed on January 9, 2012. See TecSec, Inc. v. Int'l Bus. Mach. Corp. ("TecSec I"), 466 Fed. App'x 882 (Fed. Cir. 2012). In TecSec I, this court summarily affirmed the district court's grant of summary judgment of noninfringement pursuant to Rule 36. Id. After TecSec lost its case against IBM, and without offering any additional evidence against the other defendants now before us, TecSec stipulated to noninfringement and has once again appealed the same district court's claim constructions to this court. I respectfully dissent because I believe that entertaining this appeal gives TecSec a second bite at the apple and undermines the utility of Rule 36.

I.

Rule 36 allows this court to "enter a judgment of affirmance without opinion" under specific circumstances.¹ Because there is no opinion, a Rule 36 judgment simply affirms the prior tribunal's judgment. *Rates Tech., Inc. v. Mediatrix Telecom, Inc.,* 688 F.3d 742, 751 (Fed. Cir. 2012). It does not endorse or sustain any specific part of the prior tribunal's reasoning, but it does impart finality on issues underlying the district court's judgment at least as it relates to "claim preclusion, issue preclusion, judicial estoppel, law of the case, and the like." *Id.* (quoting Fed. Cir. R. 32.1(c)); see also Fed. Cir. Internal Operating Procedure 9 ¶ 8 (Nov. 14, 2008).

¹ Rule 36 is as effective as it is simple:

ENTRY OF JUDGMENT – JUDGMENT OF AFFIRMANCE WITHOUT OPINION

The court may enter a judgment of affirmance without opinion, citing this rule, when it determines that any of the following conditions exist and an opinion would have no precedential value:

(a) the judgment, decision, or order of the trial court appealed from is based on findings that are not clearly erroneous;

(b) the evidence supporting the jury's verdict is sufficient;

(c) the record supports summary judgment, directed verdict, or judgment on the pleadings;

(d) the decision of an administrative agency warrants affirmance under the standard of review in the statute authorizing the petition for review; or

(e) a judgment or decision has been entered without an error of law.

Fed. Cir. R. 36.

Rule 36 is premised, in part, on the recognition that "[t]he workload of the appellate courts precludes preparation of precedential opinions in all cases." Fed. Cir. Internal Operating Procedure 10 ¶ 1 (Jul. 7, 2010). Indeed, unnecessary nonprecedential dispositions with full opinions only impede the rendering of decisions and delay the preparation of precedential opinions in cases that merit such effort. See id.

This is not to say that there is no value in a Rule 36 judgment. "Appeals whose judgments are entered under Rule 36 receive the full consideration of the court, and are no less carefully decided than the cases in which we issue full opinions." U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1556 (Fed. Cir. 1997). I have no reason to doubt that this court in TecSec I gave the appeal before it its full consideration and attention. Based on these propositions, I am troubled by the majority's decision to reach the claim construction issues on this appeal.

The majority reasons that the district court's judgment in *TecSec I* could have been affirmed on multiple grounds—failure of proof of an act of infringement by IBM or its customers or, alternatively, failure to show that IBM's accused machines meet the claim limitations as construed. The majority therefore reasons that this court's Rule 36 affirmance in *TecSec I* has no preclusive effect, either under the mandate rule or collateral estoppel and, in so concluding, it ignores that implicit in its reasoning is the false premise that claim construction is not a necessary part of a noninfringement determination.

An act of infringement occurs when all the elements of a claimed product or method are met by the accused device or process. See Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301, 1337–38 (Fed. Cir. 2012) (en banc) (Linn, J., dissenting) ("[T]he existence of an act of direct infringement under [35 U.S.C.] § 271(a), [requires] that all steps of a claimed method be practiced"). This is the familiar "all elements" rule.² Our cases hold that before the "all elements" rule can be deployed, however, the claims must first be construed. Specifically, an "[e]valuation of a summary judgment of noninfringement requires two steps: claim construction . . . and comparison of the properly construed claims to the accused product . . ." Abbott Labs. v. Sandoz, Inc., 566 F.3d 1282, 1288 (Fed. Cir. 2009); Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996); see also Baron Servs. v. Media Weather Innovations LLC, 717 F.3d 907, 914 n.13 (Fed. Cir. 2013) ("A determination of patent infringement, even on summary judgment, requires a two-step analysis, the first of which is claim construction.").

² Under the "all elements" rule, the accused device must contain each limitation of the claim, either literally or by an equivalent, to be infringing. TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc., 529 F.3d 1364, 1379 (Fed. Cir. 2008) (quoting Freedman Seating Co. v. Am. Seating Co., 420 F.3d 1350, 1358 (Fed. Cir. 2005)). Most often, the "all elements" rule serves to prevent vitiation of a claim limitation when the infringement theory is based on the doctrine of equivalents, but that is not the case here. Trading Techs. Int'l, Inc. v. eSpeed, Inc., 595 F.3d 1340, 1355 (Fed. Cir. 2010) (quoting in Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., 520 U.S. 17, 39 n.8 (1997)); see also TIP, 529 F.3d at 1379; Freedman, 420 F.3d at 1358; Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 949-50 (Fed. Cir. 1987) (en banc) (Nies, J., additional views). Relevant to this case, literal infringement "occurs when every limitation recited in the claim appears in the accused device, i.e., when 'the properly construed claim reads on the accused device exactly." Demarini Sports v. Worth, 239 F.3d 1314, 1331 (Fed. Cir. 2001) (quoting Amhil Enters., Ltd. v. Wawa, Inc., 81 F.3d 1554, 1562 (Fed. Cir. 1996)).

Claim construction and sufficiency of the evidence showing an act of infringement are not alternative grounds on which to find noninfringement. They are part of a singular analysis. *Baron*, 717 F.3d at 914 ("[A] district court should not avoid construing relevant terms in the asserted claims as part of its infringement analysis."). Only after the claims are properly construed can the court determine that there is no evidence of an act of infringement when there has been no showing that the accused products meet all of the limitations of the *properly construed claims*. *See Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1338 (Fed. Cir. 1999). It is during this second step of the infringement analysis that the "all elements" rule is deployed to determine whether there has been an act of infringement. *See supra* note 2.

In this case, the district court's summary judgment opinion follows the proper infringement analysis. First, the court construed the claims of TecSec's patents to determine their meaning and scope. TecSec, Inc. v. Int'l Bus. Mach. Corp., 769 F. Supp. 2d 997, 1003–09 (E.D. Va. 2011); see Cordis Corp. v. Boston Sci. Corp., 658 F.3d 1347, 1354 (Fed. Cir. 2011). Second, the district court determined whether the evidence offered by TecSec, which compared the claims to the accused products, raised a triable issue of material fact. *TecSec.* 769 F. Supp. 2d at 1010–22; see Computer Docking Station Corp. v. Dell, Inc., 519 F.3d 1366, 1373 (Fed. Cir. 2008). Given that this court affirmed (under Rule 36) the district court's judgment as based on findings that were not clearly erroneous, that the record supported summary judgment, and that the judgment was entered without an error of law, the district court's claim construction must have been critical and necessary to the decision to issue the Rule 36 affirmance. See Fed. Cir. R. 36(a), (c), (e); cf. Burke,183 F.3d at 1338 ("Summary judgment should ordinarily be vacated or reversed, however, if it is based on a claim construction that this court determines to be erroneous.").

Despite the district court's two-step infringement analysis, the majority suggests that the district court could have found either a failure of proof of an act of infringement, or alternatively, no infringement under "conventional rules of infringement" where the properly construed claims are compared to the accused products. Maj. Op. 10 n.1. In order to find a failure of proof of an act of infringement, the district court, under the "all elements" rule, needed to identify a missing element or elements from the accused products.³ Demarini, 239 F.3d at 1331. The majority points to a portion of the district court's opinion, which it asserts is a separate, independent determination of failure of proof. The majority, however, overlooks the fact that the district court identifies only two missing elements from the accused products in that section and the reasoning that the district court gives for why those elements are missing is that the accused products lack those limitations under its own claim construction, which is the second step in a traditional in-TecSec, 769 F. Supp. 2d at 1011 fringement analysis. ("[The accused products] cannot infringe the [asserted patents] because . . . those products alone are not capable of encrypting and decrypting the same object, as is required by the [the district court's construction]. See infra at III.B.3.C"); id. at 1012 ("[E]ven if some userimplemented system were to meet all of the asserted claim limitations - which, as explained below, it cannot,

³ This is not a case in which the district court intimated that there had been a failure of proof irrespective of which constructions it adopted. Instead, the district court rejected TecSec's proposed constructions initially and made no mention of them in its failure of proof analysis.

see infra at III.B.3, TecSec has provided no evidence that IBM ever made, used, sold, offered to sell, or imported th[e] entire claimed system"). Rather than being a separate, independent analysis, the district court's description of TecSec's failure of proof is merely the second step of its infringement analysis after the claims were construed in the first step.

This court previously refused to affirm summary judgment of noninfringement where the district court did not perform a "traditional infringement analysis" when it "did not conduct the first step of that analysis construing the disputed claim language"—even though the accused infringer alternatively asserted that there was a failure of proof on infringement. See Eagle Comtronics, Inc. v. Arrow Commc'n Labs., Inc., 305 F.3d 1303, 1317 (Fed. Cir. 2002). It follows that a failure of proof of an act of infringement is not an alternative to "conventional rules of infringement," but rather constitutes the second step of a traditional infringement analysis performed after the court completes the first necessary step of construing the claims.

II.

Having concluded that the district court's claim construction was critical and necessary to our prior Rule 36 affirmance, it is a straightforward step for me to conclude that TecSec is precluded from relitigating those issues it lost on in *TecSec I*. This outcome holds true under either the mandate rule or collateral estoppel.

According to the mandate rule, "[u]nless remanded by this court, all issues within the scope of the appealed judgment are deemed incorporated within the mandate and thus are precluded from further adjudication." *Engel Indus., Inc. v. Lockformer Co.,* 166 F.3d 1379, 1383 (Fed. Cir. 1999). Specifically, "issues actually decided—those within the scope of the judgment appealed from, minus those explicitly reserved or remanded by the court—are foreclosed from further consideration." *Id.*

Here, the majority reasons that the claim construction issues were not "actually decided" because the *TecSec I* panel could have affirmed on the "independent" ground of failure of proof without "implicitly or explicitly" reaching the claim construction issues. This reasoning is contrary to our precedent that claim construction and evaluation of the evidence to determine a failure of proof are not independent grounds; they are two steps necessary to reach a single noninfringement judgment. *E.g., Abbott Labs.*, 566 F.3d at 1288. Accordingly, the claim construction issues that TecSec advanced in *TecSec I* are within the scope of the Rule 36 affirmance in that case, and the mandate rule precludes TecSec from relitigating them in this appeal.

For collateral estoppel, the majority disputes whether the claim construction issues were "actually determined" and "critical and necessary to the judgment." Yet, there is no question that the district court actually determined the claim construction issues in *TecSec I. See TecSec*, 769 F. Supp. 2d at 1003–09. For the *TecSec I* panel to have affirmed the district court's judgment of noninfringement, it necessarily decided those issues as well or, at a minimum, the claim construction issues were critical and necessary to the affirmance of the district court's summary judgment decision. *See Abbott Labs.*, 566 F.3d at 1288. Thus, I find that collateral estoppel precludes TecSec from relitigating the claim construction issues it lost in *TecSec I* on appeal before this court.

* * *

As a practitioner, I once bore distaste for Rule 36 affirmances. I accepted that under a Rule 36 judgment, one party lost and another won, and that the decision of the district court was deemed not erroneous. What bothered me was that the "how" and the "why" behind the affirmance, the actual reasoning that would enable me to assist and guide a client, was lacking. The court's silence on its analysis and reasoning thundered loudly.

As a judge on this court, I fully understand and appreciate the role of Rule 36 judgments in the overall process of our work. And it is precisely this understanding that triggers my dissent in this case. When we explicitly or implicitly assume that a prior panel of this court overlooked controlling precedent and narrowly circumscribe a prior judgment issued under Rule 36, we fail to honor the principle that those cases "receive the full consideration of the court, and are no less carefully decided than the cases in which we issue full opinions." U.S. Surgical, 103 F.3d at 1556. Allowing a party to relitigate an issue it previously lost by summary affirmance will erode the confidence that underpins Rule 36, that such cases are no less carefully reviewed. Perhaps, as I once believed, this court should revisit its frequent use of Rule 36. Yet, that would be a drastic step, and would only impede the rendering of decisions and delay the preparation of precedential opinions in cases that merit such effort. A far better course would be to accord Rule 36 affirmances their appropriate weight, see Rates Tech., 688 F.3d at 751, and apply the preclusion doctrines that would prevent second bites at the apple. The majority's disposition in this case allows TecSec two bites at the claim construction apple. Accordingly, I respectfully dissent.