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Paper No. 30
Filed: April 23, 2018

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner,

v.

INFOBRIDGE PTE. LTD.,
Patent Owner.

Case IPR2017-00100
Patent 8,917,772 B2

Before CHRISTOPHER L. CRUMBLEY, PATRICK M. BOUCHER, and JOHN P. PINKERTON, *Administrative Patent Judges*.

PINKERTON, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318 and *37 C.F.R. § 42.73*

I. INTRODUCTION

In this *inter partes* review trial, instituted pursuant to 35 U.S.C. § 314, Samsung Electronics Co., Ltd. ("Samsung") challenges the patentability of claims 8 and 9 of U.S. Patent No. 8,917,772 B2 (Ex. 1001, "the '772 patent"), owned by Infobridge Pte. Ltd. ("Infobridge").

We have jurisdiction under 35 U.S.C. § 6(b). This Final Written Decision, issued pursuant to 35 U.S.C. § 318(a), addresses issues and arguments raised during trial. For the reasons discussed below, we determine that Samsung has not proven, by a preponderance of the evidence, that claims 8 and 9 of the '772 patent are unpatentable.

A. Procedural History

On October 17, 2016, Samsung requested an *inter partes* review of claims 8 and 9 of the '772 patent. Paper 2, "Pet." Samsung supported its Petition with the Declaration of Benjamin Bross (Ex. 1002) and the Declaration of Dr. Anthony Vetro (Ex. 1035). On that same day, Samsung requested *inter partes* review of claims 1–7 of the '772 patent in IPR2017-00099 ("the related IPR"). Pet. 1. On April 26, 2017, after consideration of a Preliminary Response filed by Infobridge, we instituted trial as to claims 8 and 9 of the '772 patent on the following grounds of unpatentability:

Reference(s)	Basis	Claim(s) Challenged
WD4[1]	§ 102(b)	8 and 9
WD4 and Zhou[2]	§ 103(a)	8
WD4, Zhou, and WD3[3]	§ 103(a)	9
WD4 and Han[4]	§ 103(a)	8 and 9
WD4, Han, and Zhou	§ 103(a)	8
WD4, Han, Zhou, and WD3	§ 103(a)	9

Paper 9 ("Dec."), 33–34.

On August 11, 2017, Infobridge filed a Patent Owner's Response. Paper 18 ("Response"). Infobridge supported its Response with the Declaration of Dr. Borivoje Furht. Ex. 2008. Infobridge took cross-examination testimony of Mr. Bross via deposition and submitted the transcript of that deposition with its Response. Ex. 2011.

On November 16, 2017, Samsung filed a Petitioner's Reply to Patent Owner's Response. Paper 22 ("Reply").

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[1] JCTVC-F803 (version 4), WD4: Working Draft 4 of High-Efficiency Video Coding. Ex. 1005.

[2] JCTVC-F081 (version 2), CE1: Evaluation on A.09, A.13-16 and an alternative solution. Ex. 1031.

[3] JCTVC-E603 (version 1), WD3: Working Draft 3 of High-Efficiency Video Coding. Ex. 1006.

[4] Han *et al*., IEEE Transactions on Circuits and Systems for Video Technology, Vol. 20, No. 12, December 2010. Ex. 1009.

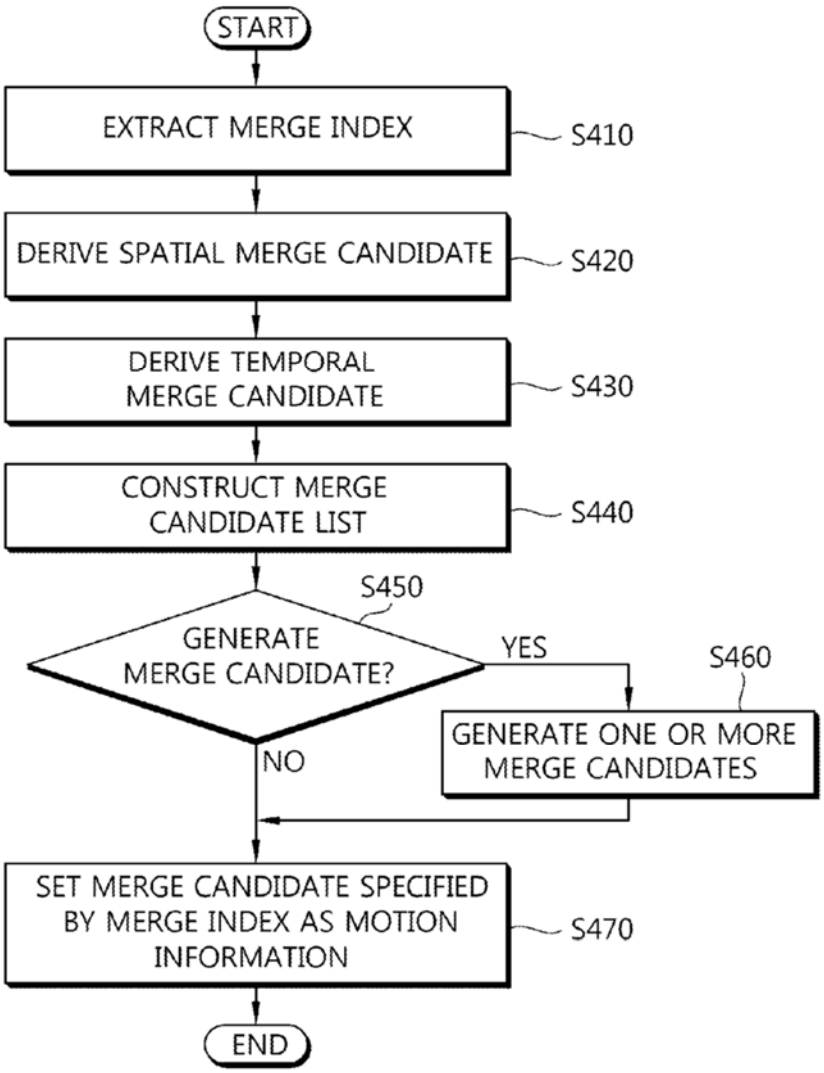
A consolidated oral hearing before the Board in this proceeding and the related IPR was held on January 25, 2018. A transcript of the oral hearing is included in the record. Paper 29.

B. The '772 Patent

The '772 patent states the invention "relates to a method of constructing [a] merge list, and more particularly to a method of deriving spatial merge candidates based on a size and a partition index of a prediction unit and deriving a temporal merge candidate." Ex. 1001, 1:5–8. According to Samsung's declarant, Mr. Bross, the '772 patent and the cited prior art generally relate to video coding technologies, and more particularly to a merge mode during video coding. Ex. 1002 ¶ 27. Mr. Bross testifies that the merge mode allows a current block in a picture to inherit motion information from spatially or temporally neighboring blocks of the picture, thereby reducing the amount of motion information to be coded for the current block. Ex. 1002 ¶ 29 (citing, e.g., Ex. 1019, 2–3, 6–7). As Mr. Bross explains, in the merge mode, the motion information of the current prediction unit ("PU") does not need to include the motion vector itself, but only a flag indicating the current PU is subject to the merge mode and an index to a merge candidate list are coded and transmitted to the decoder. Ex. 1002 ¶ 36. Mr. Bross states "[t]he decoder can use these two pieces of information to derive the complete motion information of the current PU by constructing a merge candidate list and using the index to select the appropriate merge candidate." Ex. 1002 ¶ 36.

The '772 patent discloses an image coding apparatus, including, *inter alia*, a picture division unit and an inter prediction unit. Ex. 1001, 3:20–26.

The picture division unit divides a picture or a slice into a plurality of largest coding units (LCUs) and divides each LCU into one or more coding units. *Id.* at 3:27–33. A coding unit includes one or more prediction units (PUs). *Id.* at 3:42. The inter prediction unit determines motion information of a current prediction unit using one or more reference pictures stored in the picture storing unit and generates a prediction block of the prediction unit. *Id.* at 3:65–4:1. The motion information includes one or more picture indexes and one or more motion vectors. *Id.* at 4:1–3. The bit stream received by the decoder may include a skip flag, a merge flag, and a merge index. *Id.* at 10:18–25, 10:45. If the skip flag is equal to 0 and the merge flag is equal to 1, the coding mode is a merge mode. *Id.* at 10:22–25. Figure 12, which is reproduced below, is a flow chart illustrating a method of deriving motion information in merge mode:



In describing Figure 12, the '772 patent states the merge index is extracted from a bit stream (S410). *Id.* at 10:45. The availability of spatial merge candidates and temporal merge candidates is derived (S420 and S430), and the available spatial and temporal merge candidates are used to construct a merge candidate list (S440). *Id.* at 10:48–57. It is then determined whether one or more merge candidates are generated (S450) by comparing the number of listed merge candidates with a predetermined

number per picture or slice. *Id.* at 10:58–63. If the number of merge candidates listed is smaller than the predetermined number, one or more merge candidates are generated (S460). The generated merge candidate is listed after the last available merge candidate. *Id.* at 10:67–11:1. The merge candidate specified by the merge index is set as the motion information of the current block (S470). *Id.* at 11:3–4.

C. Illustrative Claims

As noted above, Samsung challenges claims 8 and 9 of the '772 patent, which depend from claim 1. Claims 1, 8, and 9 are reproduced below.

> 1. A method of constructing a merge candidate list, comprising:
>
> checking availability of spatial merge candidates;
>
> checking availability of a temporal merge candidate;
>
> constructing the merge candidate list using available spatial and temporal merge candidates; and
>
> adding one or more candidates if the number of available spatial and temporal candidates is smaller than a predetermined number;
>
> wherein the spatial merge candidate is motion information of a spatial merge candidate block;
>
> the spatial merge candidate block is a left block, an above block, an above-right block, a left-below block or an above- left block of the current block; and
>
> if the current block is a second prediction unit partitioned by asymmetric partitioning, the spatial merge candidate corresponding to a first prediction unit partitioned by the asymmetric partitioning is set as unavailable.

> 8. The method of claim **1**, wherein a motion vector of the temporal merge candidate is a motion vector of a temporal merge candidate block within a temporal merge candidate picture, and a position of the temporal merge candidate block is determined depending on a position of the current block with an LCU.
>
> 9. The method of claim **8**, wherein a reference picture index of the temporal merge candidate is 0.

Ex. 1001, 12:44–61, 13:14–21.

II. ANALYSIS

A. Introduction

Samsung contends claims 8 and 9 of the '772 patent are unpatentable under 35 U.S.C. § 102(b) as anticipated by WD4. Pet. 37–60. Samsung also contends claims 8 and 9 are unpatentable under 35 U.S.C. § 103(a) for obviousness based on various combinations of prior art references as indicated in the table above, all of which include WD4 as the primary reference. Pet. 60–77. Infobridge contends, *inter alia*, that Samsung has failed to identify sufficient evidence to prove WD4 is prior art as a "printed publication" under 35 U.S.C. § 102(b). Response 42. Thus, the fundamental—and we conclude, dispositive—issue in this proceeding is whether Samsung has shown by a preponderance of the evidence that WD4 constitutes prior art as a printed publication under § 102(b).

B. Background regarding WD4

Mr. Bross states that the Joint Collaborative Team on Video Coding ("JCT-VC") was created in 2010 to develop a new generation high efficiency video coding ("HEVC") standard (H.265) to replace the then-

current H.264 standard. Ex. 1002 ¶ 119. Mr. Bross explains that the JCT-VC includes a group of video coding personnel from two parent organizations: Video Coding Experts Group ("VCEG") and the Moving Picture Experts Group ("MPEG"). *Id.* It is undisputed that the document designated JCTVC-F803 (version 4) ("WD4") discloses the HEVC Standard specification under development (working draft) at least on October 4, 2011, with Mr. Bross as the lead author. Ex. 1002 ¶ 65.

C. Printed Publication Analysis

1. Samsung's contentions

Samsung contends WD4 is a printed publication because, on October 4, 2011, it was uploaded to both the JCT-VC document management site and the MPEG document management site so that persons in the video coding field interested in developments relating to the latest video coding standard would have been able to access the document on those sites. Pet. 29, 34–35. Samsung also contends WD4 is a printed publication because, on October 4, 2011, it was disseminated to the JCT-VC community by e-mail. *Id.* at 29, 36. Samsung argues this is confirmed by, among other things, the Declarations of Mr. Bross and Dr. Vetro. *Id.* at 29 (citing Ex. 1002 ¶¶ 118, 129–135; Ex. 1035 ¶¶ 15, 27–29).

In particular, Samsung argues, beginning in 2010, each JCT-VC document uploaded onto the JCT-VC document management site (http://phenix.it-sudparis.eu/jct/) was made available for download, with no restrictions, such as a username or password. Pet. 31 (citing Ex. 1002 ¶ 124; Ex. 1035 ¶ 17). Samsung also argues that, given the prominence of the JCT-VC in the video coding industry, persons interested in tracking

developments of the latest video coding standard would regularly visit the JCT-VC site to ensure that products and services they were developing were consistent with the HEVC Standard under development. *Id.* at 31–32. Samsung further argues the JCT-VC site "was and continues to be organized in a hierarchical manner categorized by the JCT-VC meeting numbers," and to view and download a document, the user could click on the JCT-VC document number, which would lead the user to the "Document information" webpage for that document. *Id.* at 32 (citing Ex. 1066 (Document information webpage for WD4); Ex. 1002 ¶¶ 125–127).

According to Samsung, since at least 2011, when a JCT-VC document was registered, it was also assigned an MPEG number and mirrored (uploaded) onto the MPEG document management site (http://phenix.intevry.fr/mpeg/) where it was identified using the MPEG number and was immediately available for download. Pet. 32–33 (citing Ex. 1035 ¶ 18–19). Although the MPEG site required a user to have credentials (a username and password), Dr. Vetro states these credentials were regularly distributed to hundreds of MPEG members, including "around 200 US MPEG members during the 2011–2012 timeframe." *Id.* at 33 (citing Ex. 1035 ¶¶ 21–26). Dr. Vetro explains that, to view and download a document on the MPEG site, in at least the 2011–2012 timeframe, a user could navigate to the document register for the relevant meeting and click on the MPEG document number, which would lead the user to the "Document information" webpage for that document. Ex. 1035 ¶ 20 n.11 (citing Ex. 1069 ("Document information" webpage of m21449 corresponding to JCTVC-F803 (Working Draft 4) on MPEG site).)

Regarding dissemination of WD4 by e-mail, Samsung argues that upon completion of WD4 after the sixth meeting of JCT-VC, Mr. Bross announced, on October 4, 2011, completion of WD4 via an e-mail to the JCT-VC reflector (an e–mail listserv) (jct-vc@lists.rwth-aachen.de). Pet. 36 (citing Ex. 1002 ¶¶ 133–134; Ex. 1070 (Mr. Bross's announcement to the reflector)). The email stated that WD4 was uploaded to the JCT-VC document management site and available for downloading with a link to the WD4 document information webpage. *Id*. Mr. Bross testifies that subscribers of the JCT-VC reflector included the participants and interested individuals of the JCT-VC and that, as of July 2011, "at least 254 participants were subscribers of the reflector, if not more." Ex. 1002 ¶¶ 133–134.

2. Infobridge's contentions

First, Infobridge argues uploading WD4 to the JCT-VC website was insufficient to show it was publicly accessible, because Samsung must show both that (1) WD4 was available to those interested and skilled in the art, and not simply to those already members or participants of JCT-VC; and (2) one interested and skilled in the art, exercising reasonable diligence, could locate the reference in the JCT-VC repository. Response 42–47 (citing *SRI Int'l, Inc. v. Internet Sec. Sys., Inc*., 511 F.3d 1186, 1194–96 (Fed. Cir. 2008)). Infobridge also argues Samsung's evidence is insufficient because there is no evidence of efforts to apprise the public, including persons of ordinary skill in the art, such as Google, Inc. engineers working on a rival codec (VP9), of the reference or even the repository's availability. *Id.* at

43–44 (citing *GoPro, Inc. v. Contour IP Holding LLC*, Case IPR2015-01080, Paper 55 at 23 (PTAB Oct. 26, 2016) ("*GoPro*")). Infobridge further argues Samsung has not proffered any extrinsic evidence that anyone of skill in the art not already a member of JCT-VC actually accessed WD4. *Id.* at 43 (citing *Contrast Medtronic, Inc., v AGA Medical Corp.*, 618 F.Supp.2d 1191, 1193 (N.D. Cal., April 28, 2009) (lack of evidence that anyone outside of institution in which reference was housed created an issue of fact as to whether it was a printed publication).

Relying on *SRI*, 511 F.3d at 1195–96, Infobridge argues Samsung has presented no evidence that persons of ordinary skill in the art looking at the JCT-VC repository could reasonably have found WD4 therein. Response 44–47. Specifically, Infobridge argues one cannot search for or locate WD4 based on its subject matter, but instead WD4 resides in the folder labeled "Torino"—a folder accessed after selecting the "All meetings" link from the JCT-VC site—in which there are hundreds of links corresponding to documents, organized by JCT-VC number. *Id.* at 45–46. Citing *In re Lister*, 583 F.3d 1307, 1315 (Fed. Cir. 2009), Infobridge argues Samsung does not identify research tools available at the JCT-VC site that could aid someone in finding a given document. *Id.* at 46.

Second, for substantially the same reasons argued with respect to the uploading of WD4 to the JCT-VC site, Infobridge argues that uploading WD4 to the MPEG repository was insufficient to show WD4 was publicly available. *Id.* at 47–49. Infobridge also argues Samsung's evidence indicates MPEG interfered with the sharing of documents it maintained

outside of its members by requiring a password, which changed quarterly, to access documents in the repository. *Id.* at 47.

Third, Infobridge argues Samsung fails to show that sending an e-mail with a link to WD4 to the JCT-VC listserv rendered WD4 publicly available. *Id.* at 49–50. Infobridge argues the Board rejected this argument in *Samsung Electronics Co. Ltd. v. Rembrandt Wireless Technologies, LP*, Case IPR2014-00514, slip op. at 4 (Paper 18) (PTAB Sept. 9, 2014) ("*Rembrandt*") because the e-mail, like the one here, did not disseminate the reference to persons of interest and skill in the art at large, but to those persons who opted into the listserv. *Id.* at 49 (citing *Rembrandt* at 5–7).

3. Applicable Law

Under 35 U.S.C. § 311(b), a petitioner in an *inter partes* review may only challenge the claims of a patent based on "prior art consisting of patents or printed publications." 35 U.S.C. § 311(b). Samsung has the ultimate burden of persuasion to prove unpatentability by a preponderance of the evidence. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378–79 (Fed. Cir. 2015).

"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, 898–99 (Fed. Cir. 1986) (citations omitted). Whether a reference is publicly accessible is determined on a case-by-case basis based on the "facts and circumstances surrounding the reference's disclosure to members of the public." *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004) (citations

omitted). A reference will be considered publicly accessible if it was "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." *Kyocera Wireless Corp. v. Int'l Trade Comm'n*, 545 F.3d 1340, 1350 (Fed. Cir. 2008) (citations omitted) (GSM standard was "sufficiently accessible, at least to the public interested in the art" (citing *In re Hall*, 781 F. 2d at 899)). Just as indexing plays a significant role in evaluating whether a reference in a library is publicly accessible, "indexing, '[w]hether . . . through search engines or otherwise,' [] is also an important question for determining if a reference stored on a given website in cyberspace is publicly accessible." *Blue Calypso LLC v. Groupon Inc.*, 815 F.3d 1331, 1349 (Fed. Cir. 2016) (citing *Voter Verified, Inc. v. Premier Election Sols., Inc.*, 698 F.3d 1374, 1381 (Fed. Cir. 2012)). "[A] printed publication need not be easily searchable after publication if it was sufficiently disseminated at the time of its publication." *Suffolk Technologies, LLC v. AOL Inc.*, 752 F.3d 1358, 1365 (Fed. Cir. 2014). Whether a reference qualifies as a printed publication is a legal conclusion based on underlying factual determinations. *In re Lister*, 583 F.3d 1307, 1311 (Fed. Cir. 2009).

4. Prior Art Analysis

In the Decision, after considering Infobridge's arguments, we determined that Samsung had made a sufficient threshold showing that WD4 constitutes prior art as a printed publication under § 102(b). Decision 22–23. At institution, "the question is not whether a preponderance of the evidence supports the documents being prior art, but rather whether

Petitioner has provided sufficient evidence, based on the current record, to show a reasonable likelihood of prevailing on its asserted ground." *HTC Corp. v. Cellular Commc'ns Equip. LLC*, Case IPR2016–01503, slip op. at 16 (PTAB Feb. 13, 2017) (Paper 7). We note that "there is a significant difference between a petitioner's burden to establish a 'reasonable likelihood of success' at institution, and actually proving invalidity by a preponderance of the evidence at trial." *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1068 (Fed. Cir. 2016) (quoting 35 U.S.C. § 314(a) and comparing § 316(e)). Thus, we consider anew Infobridge's arguments presented in its Response. *See In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1377 ("the petitioner continues to bear the burden of proving unpatentability after institution, and must do so by a preponderance of the evidence at trial. And, the Board has an obligation to assess the question anew after trial based on the totality of the record.") (citations and footnote omitted); *TriVascular,* 812 F.3d at 1068 ("[T]he Board is not bound by any findings made in its Institution Decision. At that point, the Board is considering the matter preliminarily without the benefit of a full record. The Board is free to change its view of the merits after further development of the record, and *should do so* if convinced its initial inclinations were wrong."). We are not persuaded by Samsung's argument that Infobridge "has not presented anything new to rebut" our previous analysis and conclusion because we now must evaluate the evidence of record against a different, and higher, standard. *See* Reply 24.

Based on the evidence of record, it is not disputed that, on October 4, 2011, WD4 was uploaded, and available for access and downloading, on the JCT-VC and MPEG document management sites. It is also not disputed

that, on October 4, 2011, Mr. Bross sent an e-mail to the JCT-VC reflector listserv announcing WD4 was uploaded to the JCT-VC document management site and available for downloading with a link to the WD4 document information webpage.

a. JCT-VC document repository

Regarding the JCT-VC document repository, both Mr. Bross and Dr. Vetro state that JCT-VC had a general policy of making JCT-VC related documents publicly available. Ex. 1002 ¶ 124; Ex. 1035 ¶ 17. According to Mr. Bross, as well as Dr. Vetro, there were no restrictions for downloading documents uploaded on the JCT-VC document management site in at least the 2011–2012 timeframe; in other words, no credentials such as a username and password were required to download documents available on the JCT-VC site in this timeframe. Ex. 1002 ¶ 124; Ex. 1035 ¶ 17.

Infobridge does not dispute the JCT-VC's policies or procedures with respect to downloading documents uploaded on the JCT-VC document repository. Instead, Infobridge argues that Samsung has not "presented evidence that WD4 or the JCT-VC repository was advertised outside of that organization or that persons of skill and interest in the art who were not part of JCT-VC were apprised of the reference's or even the repository's availability." Response 43–44 (citing *GoPro* at 23). Infobridge also argues "Samsung fails to proffer evidence that one of skill and interest in the art would have known of JCT-VC and known to check its online repository for information pertinent to the art." *Id.* Samsung contends, however, that Infobridge "ignores the testimony of Mr. Bross and Dr. Vetro on this point." Reply 25 (citing Ex. 1002 ¶ 124, Ex. 1035 ¶ 17). Samsung also argues that

Dr. Furht testified "he was aware of the HEVC standard prior to its publication in June 2013 through research publications." *Id.* at 26 (citing Ex. 1108, 29:13–31:9).

We are not persuaded by Samsung's arguments. Although the evidence shows that, on October 4, 2011, WD4 was uploaded to, and available for downloading from, the JTC-VC document repository, we find insufficient competent evidence to support Samsung's position that a person of ordinary skill in the art would know to check the JCT-VC site for information of relevance to the art. Regarding the JCT-VC web site, Mr. Bross testifies as follows:

> [B]ased on my knowledge and recollection, given the prominence of the JCT-VC in the video coding industry, persons interested in tracking the developments of the latest video coding standard would regularly visit the JCT-VC site to ensure that products and services they were developing were consistent with the HEVC Standard under development.

Ex. 1002 ¶ 124.

Mr. Bross's testimony is conclusory and insufficiently factually supported. We understand Mr. Bross to be testifying in this regard as a fact witness pursuant to Federal Rule of Evidence 602, rather than as an expert witness pursuant to Federal Rule of Evidence 702. Under Rule 602, a fact witness may testify as to a matter only if "evidence is introduced sufficient to support a finding that the witness has personal knowledge of the matter." Fed. R. Evid. 602. Here, Mr. Bross's testimony is based on his "knowledge and recollection" and "the prominence of the JCT-VC" in the video coding industry. However, the particular factual knowledge on which the testimony is based is not described. Similarly, the "prominence" of the JCT-VC is

nothing more than an unsupported assumption. We also find Mr. Bross has not been shown to have the requisite personal knowledge to testify about persons "who would regularly visit the JCT-VC site." Even if we accepted Mr. Bross's premise of the "prominence of the JCT-VC," we would not find that to be a sufficient basis for Mr. Bross to reliably testify about persons "regularly visit[ing]" the JCT-VC site.

Dr. Furht's testimony similarly does not support Samsung's position that one of skill and interest in the art would have known of JCT-VC and known to check its online repository. When asked whether he was aware before June of 2013 that a standard body was working on the HEVC standard H.265, Dr. Furht testified "I was probably aware. I don't remember now." Ex. 1108, 30:25–31:9. Samsung argues Dr. Furht testified he was aware of the HEVC standard prior to its publication in June 2013 through research publications. Reply 26. The testimony, however, does not clearly support Samsung's contention; Dr. Furht simply replied "Yes" to the question "So before June, 2013, you were aware of HEVC." Ex. 1108, 29:18–20. Dr. Furht's testimony that he was aware of the concept of high efficiency video coding generally does not necessarily mean that he was aware of the draft HEVC standards or how to access them through the JCT-VC document repository. Regardless, this testimony is not relevant or probative of what persons of skill in the video coding art in general knew about WD4 and the availability of the JCT-VC document repository in October 2011.

Accordingly, Samsung has not presented competent evidence establishing that the JCT-VC document repository was advertised outside of

that organization or that persons interested and ordinarily skilled in the art who were not part of JCT-VC had knowledge of the repository's availability. Although WD4 was "posted" on the JCT-VC document repository and available for downloading by anyone without restrictions, this record does not establish that WD4 was accessible to anyone other than members of JCT-VC. *See SRI*, 511 F. 3d at 1197 (Fed. Cir. 2008).

Infobridge also contends that Samsung has failed to meet its burden of showing that a person of ordinary skill in the art could reasonably be expected to find the reference within the JCT-VC repository. Response 44–45. In particular, Infobridge argues the JCT-VC site "employs a *sui generis* organizational strategy to its repository," where documents are stored based on meeting numbers and not their subject matter. *Id.* at 45. Infobridge also argues there is no evidence that "the JCT-VC site provided users with any guidance on finding documents of interest." *Id.* at 46.

We agree with Infobridge. Specifically, the evidence shows that the JCT-VC document repository is organized based on "meeting numbers"—numbers associated with the names of the cities in which meetings were conducted by the JCT-VC during development of the H.265 standard. *See* Ex 1002 ¶¶ 125–127; Ex. 2001, Ex. A. As explained by Mr. Bross, once a user accesses the JCT-VC document management site (Ex. 2001, Ex. A), the following steps are required to access WD4: (1) select the "All meetings" link on the first page of the document management site; (2) select "Torino" on the All Meetings page, which is listed as meeting number 6 (Ex. 2001, Ex. B); (3) review the Torino Meeting – Document Register (Ex. 2001, Ex. C) to locate document number JCTVC-803, titled "WD4; Working Draft 4

of High-Efficiency Video Coding," and click on the link for document JCTVC-803; and, (4) select the link JCTVC-803 (version 4 - date 2011-10-04 13:26:19) from the at least three links listed on the JCTVC-F803 Document Information page (Ex 2001, Ex. D). The Torino Meeting – Document Register, mentioned in step (3), contains hundreds of links to documents listed in a table with columns labeled, among other things, "JCT-VC number," "MPEG number," "Title," "Source," and "Download" with a link symbol. Ex. 2001, Ex. C.

Although the JCT-VC site was organized in a hierarchical manner, the evidence does not establish WD4 was indexed in a manner that one ordinarily skilled in the art, exercising reasonable diligence, could locate it. *See* Response 46. There is no evidence that the JCT-VC site provided users sufficient guidance on finding documents of interest. Importantly, there is no evidence that one could search for or locate WD4 based on its subject matter. Although the Torino document register contains the number, title, and source (i.e, authors' names) of each document, the subject of the document is not listed or identified. *See In re Cronyn*, 890 F.2d 1158, 1160–61 (Fed. Cir. 1989) (finding references were not publicly accessible, despite the use of indexing, because the references were indexed only by title and author's name, rather than by subject). Furthermore, identifying a meeting location was key to navigating the JCT-VC site; however, there is no evidence showing that persons of skill in the art outside of JCT-VC would have had any knowledge or familiarity with the cities in which the JCT-VC meetings were conducted or that the names of the cities were helpful in any respect in locating a document on the site.

For these reasons, the evidence does not support the conclusion by a preponderance of the evidence that persons interested and ordinarily skilled in the art at the time of the invention would have been aware of the JCT-VC document repository site, or that, if they were aware of the site, would have been able to locate the WD4 document relied upon by Samsung.

Accordingly, we find Samsung has failed to establish by a preponderance of the evidence that there were efforts to apprise the public of WD4 or that persons interested and ordinarily skilled in the art of video coding, who were not members of JCT-VC, would have been independently aware of the JCT-VC document repository. We also determine that Samsung has failed to present sufficient evidence to establish that persons interested and ordinarily skilled in the art outside of JCT-VC, exercising reasonable diligence, could have located WD4 on the JCT-VC document repository.

b. MPEG document repository

Infobridge contends that, even if WD4 was uploaded to the MPEG repository and accessible to those with credentials, there is no evidence WD4 was accessible to anyone interested and ordinarily skilled in the art outside of MPEG. Response 47. In particular, Infobridge argues MPEG "affirmatively interfered" with sharing documents on the MPEG site with those who were not members of MPEG by requiring a password. *Id.* Infobridge also argues there is no evidence that any documents on the MPEG site were accessible to those outside the organization, nor is there evidence "of any efforts to publicize the availability of WD4 in the MPEG repository at all, even to MPEG members." *Id.* at 48. Infobridge further

argues Samsung does not present evidence that one of skill and interest in the art could reasonably have found WD4 on the MPEG site in October 2011, even if that user had access and knew the reference was there. *Id.* at 48–49.

Samsung contends Infobridge ignores the testimony of Dr. Vetro regarding the issue of whether persons outside of MPEG were aware of the MPEG site. Reply 25 (citing Ex. 1035 ¶ 17). Samsung also argues Infobridge's arguments that one interested and skilled in the art could not reasonably have found WD4 on the MPEG site should be rejected for the reasons we previously articulated. *Id.* at 26 (citing Decision 21, Ex. 1035 ¶ 20).

We have considered Dr. Vetro's testimony and find it fails to establish that the MPEG repository was publicly advertised or well known outside of MPEG. According to Dr. Vetro, although the MPEG site required a user to have a username and password, he states, based on his personal knowledge, "that these credentials were regularly distributed to around 750 MPEG members worldwide in the 2011–2012 timeframe, including in August 2011." Ex. 1035 ¶ 21. Dr. Vetro also states, "[t]he MPEG members at that time were from renowned technology companies, universities, and research institutions." *Id.* at ¶ 22. Dr. Vetro further testified:

> [O]nce such credentials (e.g., passwords) were distributed to the MPEG members in the 2011-2012 timeframe, the documents on the MPEG site were widely available at least within the companies, universities, and research institutions of the MPEG members to other individuals (e.g., engineers) involved in video coding. I understand that at that time, such entities would distribute such documents so that individuals affiliated with such entities could keep up with the latest developments in the video

> coding standards. Thus, I understand that the MPEG site and the documents stored thereon in the 2011-2012 timeframe were further accessible to thousands of individuals.

Id. at ¶ 23.

As we find regarding the JCT-VC site, we also find Samsung has not presented sufficient evidence of efforts to publicize WD4 or the MPEG repository outside of MPEG. We also find there is insufficient competent evidence to support Samsung's position that a person of ordinary skill in the art outside of MPEG would know to check the MPEG site for information of relevance to the art. Although Dr. Vetro states that he "understands" MPEG member entities would distribute documents on the site "so that individuals affiliated with such entities could keep up with the latest developments in the video coding standards," that testimony is conclusory and factually unsupported. Similarly, Dr. Vetro states he "understands" that "the MPEG site and the documents stored thereon in the 2011-2012 timeframe were further accessible to thousands of individuals." This testimony, however, is also conclusory, as Dr. Vetro fails to describe or explain any facts on which he bases this "understanding."

As with respect to the JCT-VC document repository, we also find Samsung has failed to present evidence that a person interested and skilled in the art could reasonably have found WD4 on the MPEG site in October 2011, even if the user had access and knew the reference was there. Although Infobridge argues that Samsung presents no evidence of the MPEG site topology as of October 2011 (*see* Response 49), Dr. Vetro testified about the organization of the MPEG site. Ex. 1035 ¶ 20. In that regard, Dr. Vetro testified a user could navigate to the document register for

the relevant meeting on the MPEG site (e.g., Ex. 1075) and then click on the corresponding MPEG document number. Ex. 1035 ¶ 20 n.11. Dr. Vetro also testified this would lead the user to the Document information webpage for that document, i.e., Document information webpage of m21449, corresponding to JCTVC-F803 (Working Draft 4) on the MPEG site. *Id*. (citing Ex. 1069). Like the JCT-VC document register for the Torino meeting (*see* Ex. 2001, Ex. C), the example MPEG document register (*see* Ex. 1075) is also a table listing numerous documents by number, title, and source, together with a download link. And, like the JCT-VC document information web page for document JCTVC-F803 for Torino (*see* Ex. 2001, Ex. D), the Document information web page for m21449 for Torino (Ex. 1069) reflected multiple entries as of October 4, 2011. Thus, although Dr. Vetro explained the organization of the MPEG repository, we find the MPEG repository suffered from the same deficiencies as the JCT-VC repository: (1) the site did not provide users sufficient guidance on finding documents of interest; (2) one could not search for or locate a document based on its subject because the document register reflected the number, name and author, but not the subject, of each document; and, (3) the site was organized based on the cities in which meetings were held and there is no evidence showing that these cities were known to or helpful to those interested and skilled in the art in locating a document on the site.

Thus, we find Samsung has not provided evidence of efforts to apprise the public of WD4 or that persons interested and ordinarily skilled in the art of video coding, who were not members of MPEG, would have been independently aware of the MPEG document repository. We also determine

that Samsung has failed to present sufficient evidence to establish that persons interested and skilled in the art outside of MPEG, who may have known of the MPEG document repository, could have located WD4 on the MPEG document repository exercising reasonable diligence.

c. E-mail sent to JCT-VC reflector

Samsung contends that WD4 is a printed publication because, on October 4, 2011, it was disseminated to the JCT-VC community by e-mail. Pet. 29, 36. In that regard, Mr. Bross testified that "based on my knowledge and recollection, in at least 2011-2012, all communications between members [of JCT-VC] related to the development of the HEVC standard were to be conducted via the JCT-VC reflector (jctvc@lists.rwth-aachen.de)." Ex. 1002 ¶ 133 (citing Ex. 1058 at 2). According to Mr. Bross's testimony, in the 2011–2012 timeframe, the e-mail reflector included as its members the "participants and interested individuals of the JCT-VC," and that any person could subscribe to the reflector by requesting a subscription. Ex. 1002 ¶ 133. Mr. Bross testified that, in July 2011, "the JCT-VC included at least 254 members, which consequently also were subscribed to the reflector at that time," and the number of JCT-VC members was higher than 254 in October 2011. *Id.* Mr. Bross further testified that he "announced completion of *WD4* to the JCT-VC members" on October 4, 2011, by sending an e-mail to the JCT-VC reflector stating WD4 "is uploaded to the [JCT-VC] document management site and is now available" with a link to the WD4 document information webpage for downloading the new version. Ex 1002 ¶ 134 (citing Ex. 1070). Mr. Bross also testified that the e-mail was "widely distributed to about 254 individuals

via the JCT-VC reflector at least on October 4, 2011," although he believes "the number of individuals subscribed to the JCT-VC reflector in at least 2011-2012 must have been much greater than 254 at that time." Ex. 1002 ¶ 134.

As noted by Samsung, Infobridge does not "dispute that on October 4, 2011, Mr. Bross sent an e-mail to the JCT-VC e-mail reflector announcing *WD4* was uploaded to the JCT-VC site and available for downloading with a link to the *WD4* document information webpage." Reply 25. Indeed, Infobridge contends that, "[e]ven if an email with a link to WD4 was sent to the JCT-VC email listserv, WD4 is not prior art" because the email did not disseminate the reference to persons interested and ordinarily skilled in the art at large, but only to those who opted into the listserv. Response 49–50 (citing *Rembrandt* at 5–7).

We agree with Infobridge. We find Mr. Bross's email to the JCT-VC reflector was, at best, a limited distribution of a link to the WD4 document information webpage to a select group, the members of JCT-VC and perhaps others who may have opted into the reflector. We also find Mr. Bross's testimony is insufficient to establish that the e-mail with the link to the WD4 document information webpage was generally disseminated to persons interested and ordinarily skilled in the art. "[T]his record does not evince that [WD4] was accessible to anyone other than the [JCT-VC], thus further suggesting an absence of actual public accessibility." *See SRI*, 511 F.3d at 1196.

As indicated, Mr. Bross testified that in July 2011, the JCT-VC included at least 254 members, who were consequently subscribed to the

reflector. His testimony that in October 2011, the "number of JCT-VC members was higher than 254," and that "I believe the number of individuals subscribed to the JCT-VC reflector in at least 2011-2012 must have been much greater than 254 at that time," is factually unsupported and nothing more than conjecture and speculation. Thus, we find Mr. Bross's testimony only establishes that his e-mail to the JCT-VC reflector with the link to the WD4 document information webpage was sent to 254 individuals, all or substantially all of whom were members of JCT-VC. There is no evidence of record from which we can determine whether those 254 individuals represented a significant portion of those interested and skilled in the art, or if they were only a small fraction. Accordingly, we find that the record does not support the conclusion that the e-mail was "widely" distributed, or that Mr. Bross's e-mail with the link to the WD4 document information webpage was disseminated to the extent that it was publicly accessible to persons interested and ordinarily skilled in the art. *See SRI*, 511 F.3d at 1194.

III. CONCLUSIONS

For the foregoing reasons, we conclude Samsung has not proven, by a preponderance of the evidence, that WD4 is a prior art printed publication under 35 U.S.C. § 102(b) and, therefore, has not proven that claims 8 and 9 are unpatentable.

IV. ORDER

Accordingly, it is:

ORDERED that claims 8 and 9 of U.S. Patent No. 8,917,772 have not been proven unpatentable; and

FURTHER ORDERED that, because this is a final written decision, parties to this proceeding seeking judicial review of our decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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