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Paper 36
Entered: December 15, 2016

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GENBAND US LLC and
GENBAND MANAGEMENT SERVICES CORP.,
Petitioner,

v.

METASWITCH NETWORKS LTD.,
Patent Owner.

Case IPR2015-01456
Patent 8,687,640 B2

Before JAMESON LEE, JOSIAH C. COCKS, and
ROBERT L. KINDER, *Administrative Patent Judges.*

LEE, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

A. Background

Genband US LLC and Genband Management Services Corp. ("Petitioner") filed a Petition ("Pet.") for *inter partes* review of U.S. Patent No. 8,687,640 B2 (Ex. 1001, "the '640 patent"). Paper 1. The Petition challenges the patentability of claims 1, 6, 7, 11–13, 19–21, and 25–31 of

the ’640 patent. In an initial decision, we instituted *inter partes* review of each of these challenged claims, except for claim 13. Paper 8 (“Dec. Inst.”).

Metaswitch Networks Ltd. (“Patent Owner”) filed a Patent Owner Response (Paper 18, “PO Resp.”), and Petitioner filed a Reply (Paper 20, “Reply”).[1] A consolidated oral argument for IPR2015-01456 and IPR2015-01457 was held on August 22, 2016. A transcript of the oral hearing is included in the record. Paper 35 (“Tr.”). Subsequent to the oral argument, Patent Owner filed a 2-page submission discussing the recent decision of the U.S. Court of Appeals for the Federal Circuit in *Multilayer Stretch Cling Film Holdings, Inc. v. Berry Plastics Corp.*, 831 F.3d 1350 (Fed. Cir. 2016). Paper 33. Petitioner filed a 2-page response to that submission. Paper 34.

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a). We determine that Petitioner has shown by a preponderance of the evidence that claims 1, 6, 7, 11–13, 19–21, and 25–31 of the ’640 patent are unpatentable.

B. Related Matters

The parties indicate that the ’640 patent is at issue in *Metaswitch Networks, Ltd. v. Genband US LLC*, No. 2:14-cv-744 (E.D. Tex.). Papers 1, 3. The parties further indicate that the ’640 patent is the subject of a petition for *inter partes* review in IPR2015-01457. *Id.*

C. The ’640 Patent

The ’640 patent relates to a telecommunications network including a plurality of media gateways via which can be established (1) a signaling path

[1] In addition, Patent Owner filed a Motion to Exclude (Paper 23); Petitioner filed an Opposition (Paper 25) to the Motion to Exclude; and Patent Owner filed a Reply (Paper 27) to the Opposition to the Motion to Exclude.

for transfer of signaling information for setup of a communication session between endpoint devices in the network, and (2) a media path for transfer of media data between the endpoint devices. Ex. 1001, Abstr. 2–8. At a media gateway, an inbound communication session setup request message is received along an inbound signaling path, in response to which an outbound communication session setup request message is sent along an outbound signaling path. *Id.* at Abstr. 8–20. The outbound message includes preceding device connectivity data indicating at least one media connectivity setting for at least one preceding device located before the media gateway in the signaling path. *Id.* at Abstr. 20–25. The media connectivity setting identifies one or more other devices to which the at least one preceding device is configured to be connectable in the media path. *Id.* at Abstr. 25–28. A media gateway may be bypassed in the media path depending on the content of the preceding device connectivity data in the outbound communication session setup request message. *Id.* at Abstr. 28–30.

The ’640 patent describes:

> Embodiments of the invention involve a given media gateway retrieving ensuing device connectivity data for an ensuing device which is located after a media gateway in the outbound signal path, the ensuing device connectivity data indicating at least one media connectivity setting for the ensuing device, the at least one connectivity setting identifying one or more other devices to which the ensuing device is configured to be connectable in the media path. The preceding device connectivity data and the ensuing device connectivity data can be compared in order to determine whether the given media gateway may be bypassed in the media path.

> Ensuing device connectivity data may be retrieved from storage in or accessible by a given media gateway or obtained via a request to an ensuing device that it should provide its device connectivity data including one or more media connectivity settings to the given media gateway.
>
> A device can be configured to insert its media connectivity setting into outbound communication session setup request messaging for a communication session. As the communication setup request messaging passes through multiple media gateways, preceding device connectivity data in the form of a series of media connectivity settings associated with multiple devices is built up in the communication session setup request messaging. The preceding device connectivity data can then be used by media gateways in the signaling path for a communication session to identify possible shortcuts in the media path for the communication session, and therefore avoid sending the media data through all media gateways involved in the signaling path where possible.

Id. at 11:1–29.

In a disclosed embodiment, when a media gateway receives an inbound communication session setup request message, it compares the preceding device connectivity data with ensuing device connectivity data associated with the next device in the signaling path for the communication session towards the terminating endpoint device. *Id.* at 14:23–28. If the comparison between the preceding device connectivity data and the ensuing device connectivity data identifies a match, then the media gateway knows that at least one preceding device included in the signaling path for the communication session need not be included in the media path for the communication session. *Id.* at 14:36–41. Depending on the result of the comparison, it is possible that all media gateways between the endpoint devices may be bypassed if the media connectivity settings of the two

devices indicate that the two devices may communicate media data directly between each other. *Id.* at 14:45–52.

The '640 patent explains that in the prior art every media gateway in the communication session setup path, i.e., the signaling path, is included in the media data path for actual transfer of media data, which wastes valuable network resources and degrades media quality by increasing latency. *Id.* at 1:53–59. The '640 patent permits identification of a device that need not be included in the media path by taking into account the connectivity of other devices which may be in the media path. *Id.* at 2:34–37.

Of all the challenged claims, claims 1, 26, 28, and 30 are the only independent claims. Independent claim 1 is reproduced below, with bracketed lettering added to denote specific portions thereof:

> 1. [1a] A method of establishing media bypass for a media gateway in a telecommunications network which includes a plurality of media gateways via which a signaling path for transfer of signaling information for setup of a communication session between endpoint devices can be established and via which a media path for transfer of media data between said endpoint devices during said communication session can be established, said method comprising:
>
> [1b] receiving, at said media gateway, an inbound communication setup request message requesting setup of a communication session between an originating endpoint device and a terminating endpoint device in said telecommunications network, said inbound communication session setup request message being transmitted along an inbound signaling path to said media gateway;
>
> [1c] transmitting, from said media gateway, an outbound communication session setup request message in response to receiving said inbound communication setup message, said outbound communication session setup request message

being transmitted along an outbound signaling path from said media gateway; and

[1d] including preceding device connectivity data in said outbound communication session setup request message,

[1e] said preceding device connectivity data indicating at least one media connectivity setting for at least one preceding device which is located before said media gateway in said inbound signaling path, the least one media connectivity setting identifying one or more other devices to which the preceding device is configured to be connectable in said media path,

[1f] to enable bypass of said media gateway in said media path if an ensuing device in said outbound signaling path determines that such bypass should be conducted.

Id. at 26:15–47. There are substantial similarities between claims 1 and 28, and several differences. Claim 1 refers to a "media gateway," and a "preceding device" and an "ensuing device," and refers to enabling bypass of the "said" media gateway "if an ensuing device" determines that such bypass should be conducted." Claim 28 refers to a "bypass determining media gateway" and a "preceding device." Claim 28 also refers to determining whether there should be bypass of a "preceding media gateway" rather than enabling bypass of "the media gateway."

Independent claim 28 is reproduced below:

28. A method of establishing media bypass for a bypass-determining media gateway in a telecommunications network which includes a plurality of media gateways via which a signaling path for transfer of signaling information for setup of a communication session between endpoint devices can be established and via which a media path for transfer of media data between said endpoint devices during said communication session can be established, said method comprising:

receiving, at said bypass-determining media gateway, an inbound communication setup request message requesting

> setup of a communication session between an originating endpoint device and a terminating endpoint device in said telecommunications network, said inbound communication session setup request message being transmitted along an inbound signaling path to said bypass-determining media gateway;
>
> transmitting, from said bypass-determining media gateway, an outbound communication session setup request message in response to receiving said inbound communication setup request message, said outbound communication session setup request message being transmitted along an outbound signaling path from said bypass-determining media gateway; and
>
> receiving preceding device connectivity data in said inbound communication session setup request message, said preceding device connectivity data indicating at least one media connectivity setting for at least one preceding device which is located before said bypass-determining media gateway in said inbound signaling path, the least one media connectivity setting identifying one or more other devices to which the preceding device is configured to be connectable in said media path, to enable bypass of a preceding media gateway in said media path; and
>
> determining that said preceding media gateway should be bypassed based on said preceding device connectivity data, and configuring said outbound communication session setup request message in accordance with said determination.

Id. at 29:39–30:12.

Independent claim 26 is directed to a computer program product and its limitations essentially correspond to those of claim 1. *Id.* at 30:6–7. Claim 30 is drawn to a computer product and its limitations essentially correspond to those of claim 28. *Id.* at 29:39–30:12.

D. Evidence Relied Upon

Reference		Date	Exhibit
Ejzak	U.S. Pub. No. 2009/0010270 A1	Jan. 8, 2009	Ex. 1003
Cisco	*Cisco Unified Border Element (SP Edition) on Cisco ASR 1000 Series*, White Paper, Cisco Systems, Inc.	2009	Ex. 1010
Intel	*Delivering Secure IP-Based Services, Jasomi Uses Intel® Technology and AdvancedTCA for Its High-End Carrier and IMS Session Border Controller*, Solutions White Paper, Jasomi Networks	2005	Ex. 1011

Petitioner also relies on the Declaration of James R. Bress. Ex. 1004. Patent Owner relies on the Declaration of Robert Akl. Ex. 2006.

E. The Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

Reference(s)	Basis	Claims Challenged
Ejzak and Intel	§ 103(a)	1, 6, 7, 11, 12, 19–21, and 25–31
Ejzak and Cisco	§ 103(a)	1, 6, 7, 11, 12, 19–21, and 25–31

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142–46 (2016). Under that standard, we assign claim terms their ordinary and customary meaning, as would be understood by one of ordinary skill in the art at the time of the invention, in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). There are, however, two exceptions: "1) when a patentee sets out a definition and acts as his own lexicographer," and "2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution." *See Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). It is inappropriate to limit a claim to a preferred embodiment without a clear intent in the specification to redefine a claim term or a clear disavowal of claim scope. *Id.* Limitations that are not a part of the claim should not be imported into the claim. *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004).

If an inventor acts as his or her own lexicographer, the definition must be set forth in the specification with reasonable clarity, deliberateness, and precision. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998). It is improper to add into a claim an extraneous limitation, i.e., one that is added wholly apart from any need for the addition. *See, e.g., Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948, 950 (Fed. Cir.

1993); *E.I. Du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433 (Fed. Cir. 1988).

Only terms which are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011); *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc*., 200 F.3d 795, 803 (Fed. Cir. 1999).

Key to this decision are these claim terms and phrases: (1) "preceding device"; (2) "ensuing device"; (3) "media gateway"; and (4) "media connectivity setting identifying one or more other devices to which the preceding device is configured to be connectable in said media path."

"preceding device" and "ensuing device"

The '640 patent defines "preceding device"[2] and "ensuing device"[3] as follows:

> A preceding device is a device located before a given device (endpoint or media gateway) in the inbound signaling path, i.e., it is located between the given device and the original endpoint device for the communication session. A preceding device can also comprise the originating endpoint device itself.
>
> An ensuing device is a devise located after a given device (endpoint or media gateway) in the outbound signaling path, i.e., it is located between the given device and the terminating endpoint device for the communication session. An ensuing device can also comprise the terminating endpoint device itself.

Ex. 1001, 10:56–67.

In our initial decision, we accorded these terms their respective definitions as provided in the Specification and reproduced above. Dec.

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[2] Recited in each of independent claims 1, 26, 28, and 30.

[3] Recited in independent claims 1 and 26.

Inst. 11. We also added, for clarification, that the two definitions should be read together in the context of the same given device, if both terms appear in the same claim, unless an alternative given device is identified in the claim. *Id.* Subsequent to institution of trial, neither party expressed disagreement with our construction. Accordingly, we maintain the same construction as we articulated in our initial decision.

"media gateway"

The term "media gateway" is recited in each independent claim. Neither Petitioner nor Patent Owner has proposed a construction for the term. It appears to be a recognized term in the art and is used in the Specification of the '640 patent and referred to by the parties in that manner. According to the '640 patent, a media gateway can be in the form of a "SBC" (Session Border Controller). Ex. 1001, 8:61–62. The parties do not dispute that prior art references Cisco and Intel are directed to media gateways in the form of a SBC.

Regarding what was well known in the art about SBCs, Cisco describes that SBCs are generally deployed in one of two models: a Unified SBC Model ("unified model"), and a Distributed SBC Model ("distributed model"). Ex. 1010, 2. In the unified model, there is a single physical device as is shown on the left side in Figure 1 of Cisco, including two logical elements "SBE" and "DBE," and in the distributed model, the two logical elements "SBE" and "DBE" are part of different physical devices as shown on the right side in Figure 1 of Cisco. *Id.* The two models of Figure 1 of Cisco are reproduced below:

Figure 1. Unified and Distributed SBC Model

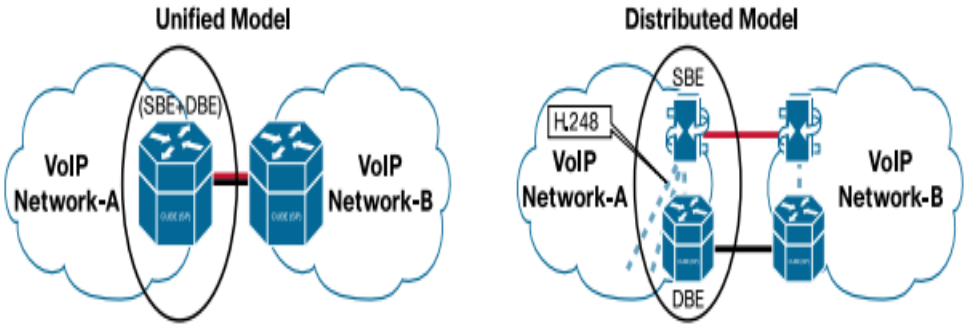

Figure 1 illustrates a unified model and also a distributed model of a Session Border Controller, in a side-by-side comparison.

For the foregoing reasons, we determine that a media gateway encompasses a SBC in the form of either one of two different models, a unified model in which logical elements "SBE" and "DBE" are incorporated within a single physical device, and a distributed model in which the two logical elements "SBE" and "DBE" are part of different physical devices.[4] Under this construction, a SBC having the structure of a unified model is a media gateway, and so is a SBC having the structure of a distributed model.[5]

"media connectivity setting" / "media connectivity setting identifying one or more other devices"

The phrase "media connectivity setting identifying one or more other devices" appears in each of independent claims 1, 26, 28, and 30. Petitioner urges that "media connectivity setting" should be construed as "Information

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[4] The logical element "SBE" is a signaling path border element that provides signaling functions. *Id.* The logical element "DBE" is a data path border element that provides media-related functions. *Id.*

[5] This issue was raised and discussed in our initial decision and was a part of our basis for instituting trial. Dec. Inst. 16, 21. Patent Owner did not argue in its Patent Owner Response that a media gateway has to have the structure of a unified model SBC.

describing one or more parts, domains or regions of a telecommunications network to which a device has media connectivity." Pet. 12. In the initial decision, we stated:

> We note that the Specification of the '640 patent states:
>
> > A media gateway has one or more media connectivity settings including one or more parts of telecommunications network 1 via which a respective device is able to transmit and receive media data. A device will typically not have access to all parts of telecommunications network 1 so media connectivity settings for the device describes the parts, domains or regions of telecommunications network 1 to which the device does have media connectivity.
>
> *Id.* at 11:30–37. Patent Owner does not disagree with Petitioner's proposed construction. Prelim. Resp. 15. On this record, we adopt Petitioner's proposed construction as the broadest reasonable interpretation. Thus, "media connectivity setting" is construed to mean "*information describing one or more parts, domains or regions of a telecommunications network to which a device has media connectivity.*"

Dec. Inst. 11–12.

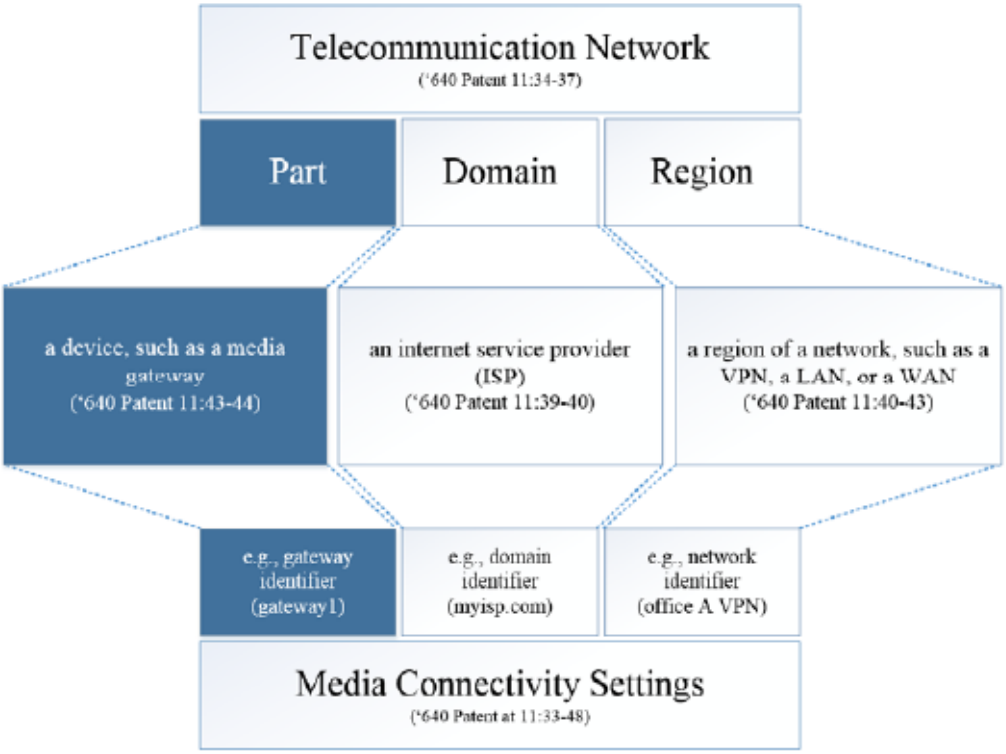
In the Patent Owner Response, Patent Owner does not disagree with our initial construction of the term "media connectivity setting." PO Resp. 16. Here, we maintain the construction of "media connectivity setting" that we set forth in the initial decision, as reproduced above, and for the reasons explained in the initial decision.

Patent Owner argues, however, that there is significance to the phrase "identifying one or more other devices" that immediately follows the term "media connectivity setting." *Id.* We agree. The limitation "identifying one or more other devices" may not be ignored. Nevertheless, for reasons

discussed below, Patent Owner is unpersuasive in arguing (PO Resp. 18–19) that "at least one media connectivity setting identifying one or more other devices" should be construed as "information identifying one or more parts of a telecommunication network, *distinct from either a domain or a region of the telecommunications network*." (Emphasis added). Specifically, we determine that the requirement of "identifying one or more other devices" does not exclude information describing domains or regions of a telecommunications network from satisfying the claimed "at least one media connectivity setting identifying one or more other devices."

Patent Owner presents its argument as follows:

> A "device" is a "part" of a telecommunications network, such as an endpoint or media gateway. Ex. 1001 ['640 Patent] at 11:46 ("a device (endpoint device or media gateway)"); *see also* Ex. 2006 [Akl Declaration] at ¶ 56. A "device" is neither a "domain" nor a "region" of a telecommunications network. Ex. 2006 [Akl Declaration] at ¶ 56; *see also* Ex. 2004 [Bress Transcript 1] at 137:15–18 [footnote omitted] and 142:7–11 [footnote omitted]. The following figure demonstrates the relationships between parts, domain, and regions and their associated media connectivity settings:



> Thus, Petitioner's proposed construction of "*media connectivity settings*," which recites *parts, domains or regions*, creates a contradiction with respect to the claim language, which recites *at least one media connectivity setting identifying one or more other* ***devices***. Ex. 2006 [Akl Declaration] at ¶ 57.

PO Resp. 16–18. The argument is unpersuasive for two reasons.

First, the above-reproduced figure does not appear in the Specification of the '640 patent. Rather, it is a creation of the Patent Owner. The figure creates the impression that a "part" necessarily is a "device." Patent Owner, however, does not provide adequate support for such a narrow reading of "part." Although a "device" is a "part" of a telecommunications network, that does not mean a "part" has to be a "device." Even Dr. Akl, Patent Owner's expert, testified only that a "device" is a "part" of a telecommunications network and not that a "part" of a telecommunications network has to be a "device." Ex. 2006 ¶ 56.

Second, the figure also creates the impression that neither a domain nor a region would identify a device. But Patent Owner does not provide adequate support for such a narrow reading of "domain" and "region." In that regard, Dr. Akl, Patent Owner's expert, testifies only that a "device" is neither a "domain" nor a "region," not that a "domain" or a "region" would not or could not identify a "device." *Id.*

By assuming that a "part" has to be a "device," and by assuming that neither "domain" nor "region" would identify one or more devices, Patent Owner sees an alleged contradiction in allowing *media connectivity setting* to be as we have construed it, and the phrase that immediately follows the claim term—"identifying one or more other devices." Because of that alleged contradiction, Patent Owner contends that "at least one media connectivity setting identifying one or more other devices" should be construed as "information identifying one or more parts of a telecommunication network, distinct from either a domain or a region of the telecommunication network."

But there is no such contradiction, because the record does not support a finding that a "part" of a telecommunications network has to be a "device," or that "domain" and "region" cannot identify one or more devices. Patent Owner has not identified any portion of the Specification that gives support to the notion that a "part" of a telecommunications network necessarily has to be a device, and Patent Owner's expert also has not testified to that effect. Moreover, if a domain has been identified, then all devices within the domain are identified relative to devices that are not in the domain, and if a region, such as a network, has been identified, then it follows that all devices

within the network are identified relative to devices not in the network. Patent Owner's expert provides no testimony to the contrary.

Under the rule of broadest reasonable interpretation, we do not read "identifying one or more other devices" as requiring the specific naming of each such device. Such a reading is too narrow, given that the object doing the identifying is a *media connectivity setting*, which is defined in the Specification, as discussed above, as information describing one or more parts, domains or regions of a telecommunications network to which a device has media connectivity. A "part," a "domain," and a "region" all are capable of designating one or more devices without providing a specific name or address to each such device. None of the claims requires a specific manner of identification. And even if a particular manner of identification is required, the "part" alternative of *media connectivity setting* can no more meet it than can the "domain" and "region" alternatives of *media connectivity setting*, because all encompass more than a specific device. Thus, there is no contradiction like Patent Owner asserts. Instead, all three "part," "domain," and "region" alternatives of *media connectivity setting* are capable of identifying one or more devices.

Although it is not necessary to rely on the doctrine of claim differentiation to support our claim construction, the doctrine adds further support to our construction. Under 35 U.S.C. § 112, ¶ 4, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed, and a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers. Claim 15 depends from claim 1 and adds: "wherein said at least one media connectivity setting comprises

one or more of: a domain identifier, a network identifier, and a gateway identifier." If claim 1 already excludes information about domains and regions from constituting media connectivity setting identifying one or more other devices as is urged by Patent Owner, then claim 15 would not further limit claim 1. Rather, in that case, claim 15 facially would be broader than claim 1 by allowing the media connectivity setting to be a domain identifier or a network identifier. As is noted by Petitioner (Reply 3), a dependent claim cannot be broader than a base claim from which it depends. Patent Owner cites to *Multilayer Stretch Cling Film Holding Inc. v. Berry Plastic Corp.*, 831 F.3d 1350, 1360 (Fed. Cir. 2016), for the proposition that the "the language of a dependent claim cannot change the scope of an independent claim whose meaning is clear on its face," and that "[t]he dependent claim tail cannot wag the independent claim dog." Reply 1. But *Multilayer* is inapposite to the circumstance here. For instance, on this record the term "media connectivity setting" is not a term of art with a well-established conventional meaning. Also, there is no facially clear meaning on how specific an "identification" has to be. Accordingly, we do not have the situation where the scope of an independent claim is clear on its face.

For all of the reasons discussed above, we reject Patent Owner's argument that "at least one media connectivity setting identifying one or more other devices" should be construed as "information identifying one or more parts of a telecommunication network, *distinct from either a domain or a region of the telecommunication network*." (Emphasis added). Also, we reaffirm our initial determination that "media connectivity setting" is construed to mean "*information describing one or more parts, domains or*

regions of a telecommunications network to which a device has media connectivity."

B. Level of Ordinary Skill in the Art

Petitioner asserts:

> As of the priority date of the '640 Patent of March 22, 2011, a person of ordinary skill in the art ("POSITA") would have been someone with a Bachelor's Degree in electrical engineering, computer science, or a related scientific field, and at least two years of work or research experience in the telecommunications industry, which could include telecommunications device design, telecommunications software development, or related areas. Alternatively, a POSITA in the relevant timeframe would have been someone with an advanced degree, such as a Master's Degree, in electrical engineering, computer science, or a related scientific field, focusing on telecommunications technology. Alternatively, a POSITA in the relevant timeframe could have been someone lacking formal technical education but having experience in the telecommunications industry that would be equivalent to such education. *See* Ex. 1004 at ¶ 128.

Pet. 19–20.

Patent Owner does not explicitly take a position on the level of ordinary skill in the art. We determine that no express finding on a specific corresponding level of technical education and experience is necessary, and that the level of ordinary skill in the art is reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

C. Claims 1, 6, 7, 11–12, 19–21, and 25–31 as Obvious over Ejzak and Cisco

We have reviewed the arguments and evidence presented by Petitioner, and determine that, notwithstanding the arguments of Patent Owner, which we discuss below, Petitioner has established, by a preponderance of the evidence, that claims 1, 6, 7, 11–12, 19–21, and 25–31 are unpatentable on the ground of obviousness over Ejzak and Cisco.

Ejzak

Ejzak states that its disclosure relates to "bearer path optimization through a succession of border gateways in an Internet Multimedia Subsystem (IMS) network." Ex. 1003 ¶ 1. Ejzak explains, more particularly, that its disclosure relates to "identifying alternate end-to-end media paths through Internet Protocol (IP) realms using substitute Session Description Protocol (SDP) parameters." *Id.* Ejzak indicates that its system and method "allow Session Initiation Protocol (SIP) based networks to bypass one or more border gateways that would otherwise be included in the media path." Ex. 1003 ¶ 2. Explaining an SIP network, Ejzak describes the following:

> A SIP based network call has a call signaling path and a bearer path. The call signaling path handles call control data which is used to setup, connect and process the call. The bearer path is the voice data connection over which a conversation takes place, and is also referred to as a multimedia session path or media path in this disclosure.
>
> In IMS and other SIP based networks, border gateways are deployed between IP realms defined by each network. Within an IP realm every IP endpoint is reachable from every other IP endpoint using a common IP address space. The border gateways provide security to the IP realm by limiting access to the IP endpoints within an IP realm. A multimedia session path

> may traverse an arbitrary number of IP realms along an end-to-end media path.

Id. ¶¶ 3, 4.

Ejzak observes that when a border gateway (BG) has access to additional IP realms on the path, there is an opportunity to create a shorter media path. *Id.* ¶ 4. By shortening the route of a bearer path through optimization, Ejzak frees up the resources of the border gateways, reducing bearer traffic through IP networks, and minimizing end-to-end delay. *Id.* ¶ 5.

Ejzak's system involves use of an application level gateway (ALG) configured to receive a session description protocol offer that includes a list of previously traversed internet protocol realms. *Id.* at Abstr. The ALG determines whether the next internet protocol realm to be traversed is on the list of previously traversed internet protocol realms. *Id.* If so, then at least one border gateway associated with the current and previously traversed internet protocol realms would be bypassed. *Id.* The bypassing is facilitated by substituting information in the session description protocol offer. *Id.*

Figure 1 of Ejzak is reproduced below:

FIG. 1

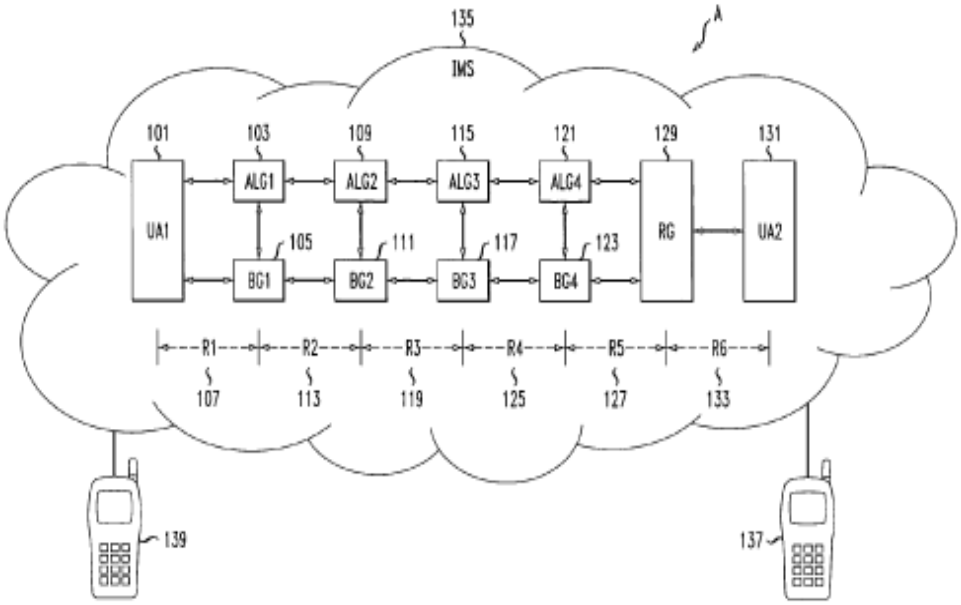


Figure 1 illustrates a portion of the communication network system disclosed by Ejzak. *Id.* ¶ 33.

In Figure 1, reference letter "A" designates a communications infrastructure including one or more IMS networks 135 and two associated VoIP (Voice over Internet Protocol) telephones 137 and 139. *Id.* ¶ 38. IMS network 135 includes first user agent 101, second user agent 131, four ALGs 103, 109, 115, and 121, four BGs 105, 111, 117, and 123, residential gateway 129 and six IP realms 107, 113, 119, 125, 127, and 133. *Id.* ¶ 36. Ejzak states that a call may be processed through user equipment 137 or 139 to IMS 135, and that Figure 1 shows a typical call configuration between IP endpoints 101 and 131 (user agents UA1 and UA2). *Id.* ¶ 42.

Ejzak explains that SIP signaling goes between the UAs via at least one ALG, and multimedia flow between the UAs takes place via border gateways 105, 111, 117, 123, and optionally residential gateways (RG) 129 associated with one or both UA1 101 and UA2 131. *Id.* Ejzak also explains

(1) that each border gateway is controlled by its own corresponding ALG, (2) that IP realms 107, 113, 119, 125, 127, and 133 are associated with each segment of the multimedia session path, and (3) that the border gateways and residential gateways act as IP endpoints and access points for the corresponding IP realms. *Id.* Each border gateway has access to at least two corresponding IP realms. *Id.* Within an IP realm, every IP endpoint is reachable from any other IP endpoint using a common IP address space, and each border gateway typically provides a firewall to limit access to IP endpoints within a realm. *Id.* ¶ 43.

In Ejzak, the multimedia session path between UAs is established via an end-to-end SDP offer/answer exchange where each ALG may modify the connection and port information associated with each media line in the SDP to insert its associated border gateway in the media path. *Id.* ¶ 51. Each ALG may also determine whether one or more border gateways or residential gateways can be bypassed and then to modify forwarded SDP messages to cause implementation of the bypass in the media path. *Id.*

Ejzak defines an SDP extension attribute by the name "traversed-realm" as connection and port information for a prior IP realm traversed through on the signaling path. *Id.* ¶ 55. "Each instance of traversed-realm has an instance number, realm identifier, connection and port data, and optional cryptographic signature computed using an algorithm private to each IP realm so as to ensure the integrity of the traversed realm data." *Id.*

Ejzak discloses that when an ALG receives an SDP offer from a UA or an ALG, it determines the identity of the IP realm for the next segment of the media path. *Id.* ¶ 69. If the ALG further determines that there is a match between a traversed realm indicated in the received SDP offer and the next

IP realm, the ALG may cause bypass of border gateways by (1) replacing the connection and port information in the SDP offer with the connection and port information from the earliest traversed-realm instance associated with the next IP realm, (2) deleting every traversed-realm instance after the one used to populate the outgoing connection and port data, and (3) forwarding the modified SDP offer to the next ALG. *Id.* ¶ 73.

Claims 1, 26, 28, and 30

At the outset, we note that as argued by Petitioner in the Petition (Pet. 37), and based on our discussion of media gateway above, we find that each pair of ALG and associated BG in Ejzak constitutes a media gateway.[6] This was a determination first made in the initial decision (Dec. Inst. 21), and Patent Owner put forth no contrary position in the Patent Owner Response. Tr. 48:7–18. Petitioner additionally argues that it would have been obvious to one with ordinary skill to combine each pair of ALG and associated BG in a single physical device, in view of Ejzak alone, because it was well-known in the art that the signaling and media functions of the ALG and BG could be implemented in a single physical device. Pet. 20–21.[7] That contingent argument is unnecessary, because none of the claims requires the media gateway to be in the form of a single physical device, such as a unified

[6] In particular, each ALG and associated BG pair is a distributed mode SBC (Session Border Controller).

[7] Petitioner cites to Cisco and Intel, respectively, as teaching that signaling and media functions can be performed by a single physical device. Pet. 21. In particular, Cisco discloses that SBCs come in two different models, a distributed model and a unified model, and that in the unified model the signaling and media functions are performed not by separate units but by a single operative unit. Ex. 1010, 2.

model SBC. Even if we assume that a single physical device is required by the claims, then for reasons expressed by Petitioner, we determine that it would have been obvious to one with ordinary skill in the art, based on the disclosure of Ejzak, to implement Ejzak's ALG and corresponding BG in a single physical device.[8] In that regard, Cisco was cited by Petitioner to show what was well known to one with ordinary skill in the art. In any event, for the reasons indicated by Petitioner on pages 21–25 of the Petition, Cisco would have suggested to one with ordinary skill in the art to implement Ejzak's ALG and corresponding BG in a single physical device.[9]

Petitioner asserts that "Ejzak discloses all features of Claim 1 of the '640 Patent." Pet. 27. We find that Petitioner has established that assertion by a preponderance of the evidence, notwithstanding the contrary arguments of Patent Owner, which are discussed below.

For limitation [1a], Petitioner provides persuasive explanation on pages 27 and 31–33 of the Petition. In summary, and by reference to Figure 1 of Ejzak, letter "A" designates a telecommunications network including a plurality of media gateways connecting internet protocol realms (IP realm), where each media gateway has a pair of ALG and BG, and where a signaling

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[8] Patent Owner argues against such a combination to have a unified device, on the basis that Ejzak mentions the importance of freeing the resources of BGs. PO Resp. 13. But a prior art reference must be considered for everything it teaches by way of technology and is not limited to the particular invention it is describing and attempting to protect. *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 907 (Fed. Cir. 1985). The choice of a distributed model or a unified model, both of which were well known to one with ordinary skill in the art, represents mere tradeoff considerations routinely contemplated by one with ordinary skill in the art.

[9] *See* Footnote 8.

path between endpoint devices is established through the ALGs and a media path between endpoint devices is established through the BGs. Within each IP realm every endpoint is reachable from every other endpoint using a common IP address space. Ex. 1003 ¶ 4. Ejzak discloses limitation [1a].

For limitation [1b], Petitioner provides persuasive explanation on pages 27, 28, and 34 of the Petition. Specifically, the inbound communication session setup request message is in the form of a "SDP offer," and it is received by the ALG of each gateway along a signaling path. Pet, 27, 33–34. Ejzak discloses limitation [1b].

For limitation [1c], Petitioner provides persuasive explanation on pages 28–29 and 34 of the Petition. Specifically, after receiving an SDP offer from the ALG of a preceding media gateway on the signaling path, the ALG in the current media gateway adds a traversed-realm instance to the received SDP offer and then forward the modified SDP offer to the next media gateway on the signaling path. Pet. 27–28, 34–35. The modified SDP offer constitutes the outbound communication session setup request message. *Id*. Ejzak discloses limitation [1c].

For limitation [1d], Petitioner provides persuasive explanation on pages 28 and 34–35 of the Petition. Specifically, the added traversed-realm instance in the modified SDP offer includes preceding device connectivity data in the form of connection and port information for a prior IP realm. Pet. 28, 34–35. Ejzak discloses limitation [1d].

For limitation [1e], Petitioner provides persuasive explanation on pages 29 and 35–36 of the Petition. Specifically, the IP realm information in the "traversed-realm" SDP extension field ("attribute") includes information about previously traversed IP realms and constitutes the media connectivity

setting for a preceding device, e.g., BG or media gateway. Pet. 29, 35–36. Petitioner explains that within an IP realm there are endpoint devices that are mutually reachable by a common IP address space. *Id.* at 36. Petitioner also explains that traversed-realm SDP extension of an outbound SDP offer has IP realm information about prior BGs. Pet. 29, 37. In that connection, Petitioner relies (Pet. 29) on Declaration ¶ 168 of Mr. Bress, which reads:

> 168. Furthermore, the traversed-realm information in the SDP extension field included in the SDP offer message received by an ALG includes traversed-realm information regarding one or more preceding BGs. Therefore, the traversed-realm information copied from the received SDP offer message into the forwarded SDP offer message is necessarily preceding device connectivity data "for at least one preceding device which is located before said media gateway in said inbound signaling path."

Ex. 1004 ¶ 168.

In summary, traversed-realm attribute is information about a preceding BG or media gateway including the BG, and that information identifies devices in a traversed IP realm which are accessible from that BG or media gateway. Ejzak discloses limitation [1e].

For limitation [1f], which recites "to enable bypass of said media gateway in said media path if an ensuing device in said outbound signaling path determines that such bypass should be conducted," Petitioner provides persuasive explanation on pages 16–17, 29–30, and 36–37 of the Petition. For instance, Petitioner explains that in Ejzak, if there is a match between a preceding BG's IP realm and the next IP realm, one or more BGs may be bypassed. Pet. 16, 30. Petitioner cites to "Case 1," described in Ejzak, as one example. Pet. 16–17. Ejzak describes:

> An example of case 1, using FIG. 1 as reference, is that upon receiving an SDP offer from the direction of UA1, ALG3 determines that R4 125 and R1 107 are instances of the same IP realm. ALG3 substitutes the connection and port information from UA1 into the outgoing SDP offer and deletes the traversed-realm instances for R2 113 and R3 119 from the SDP before forwarding. After the end-to-end SDP offer/answer transaction is completed, the media path will bypass BG1 105, BG2 111, and BG3 117.

Ex. 1003 ¶ 74.

Petitioner also relies on "Case 3," described in Ejzak, as another example. Pet. 17, 30. Ejzak describes:

> An example of case 3, using FIG. 1 as reference, is that upon receiving an SDP offer from the direction of UA1, ALG4 121 determines that BG4 123 has access to R2 113. ALG4 121 substitutes its BG connection and port information into the SDP offer, uses the connection and port information from the traversed-realm instance for R2 113 as the remote connection and port information for the UA1 101 side of BG4 123, deletes the traversed-realm instance for R3 119 and R4 125 from the SDP offer, and adds the traversed-realm instance for R5 127 before forwarding. After the end-to-end SDP offer/answer transaction is completed, the media path will bypass BG2 111 and BG3 123.

Ex. 1003 ¶ 78.

Petitioner's articulated reasoning is persuasive. We note, in particular, that the media gateway making the bypass determination of preceding BGs is an ensuing device relative to those BGs. Ejzak discloses limitation [1f].

Independent claim 28 is the same as claim 1 in all material respects and in the context of applying the claim to the disclosure of Ejzak. While claim 1 refers to bypass of a media gateway by an ensuing device (e.g., media gateway), claim 28 requires bypass of a preceding media gateway

without mentioning an ensuing device. Ejzak's bypassing of a preceding gateway as discussed above satisfies both recitations. Thus, for the same reasons as discussed above in the context of claim 1, notwithstanding the arguments of Patent Owner which are addressed below, we are persuaded that Ejzak discloses all features of claim 28. Additionally, in the alternative, as discussed above in the context of claim 1, we determine also that in light of Cisco, it would have been obvious to one with ordinary skill in the art to implement each pair of ALG and BG in Ejzak as a single physical device, although we conclude that there is no such requirement in the claims.

Independent claim 26 is directed to a computer program product and its limitations essentially correspond to those of claim 1. Claim 30 is drawn to a computer product and its limitations essentially correspond to those of claim 28. For the same reasons as discussed above in the context of claims 1 and 28, and further noting that Ejzak discloses that its method may "take place in a variety of hardware and/or software configurations," we are persuaded that Ejzak discloses all features of claims 26 and 30. At a minimum, it would have been obvious to one with ordinary skill in the art to implement the method of Ejzak in the form of a computer program product. Also, in the alternative as discussed above and assuming each pair of ALG and BG in Ejzak has to be implemented as a single physical device to meet the claims, it would have been obvious to one with ordinary skill in the art to implement each pair of ALG and BG in Ejzak as a single physical device.

Claims 6, 7, 11, 12, 19–21, 25, 27, 29, and 31

Claims 6, 7, 11, 12, 19–21, and 25 depend directly or indirectly from claim 1. Petitioner has persuasively accounted for claim 6 on pages 38–39 of the Petition, for claim 7 on pages 40–41 of the Petition, for claim 11 on

pages 42–43 of the Petition, for claim 12 on pages 44–47 of the Petition, for claims 19–21 on pages 51–53 of the Petition, and for claim 25 on page 53 of the Petition. For the reasons explained by Petitioner, and notwithstanding the arguments of Patent Owner which are addressed below, we find that Ejzak discloses each limitation added by these dependent claims relative to their base claims.

Claim 27 depends from claim 26. Claim 29 depends from claim 28. Claim 31 depends from claim 30. Petitioner has persuasively accounted for claims 27, 29, and 31 on pages 58–59 of the Petition. For the reasons explained by Petitioner, and notwithstanding the arguments of Patent Owner which are addressed below, we find that Ejzak discloses each limitation added by these dependent claims relative to their base claims.

D. Claims 1, 6, 7, 11, 12, 19–21, and 25–31 as Obvious over Ejzak and Intel

We have reviewed the arguments and evidence presented by Petitioner, and determine that, notwithstanding the arguments of Patent Owner, which we discuss below, Petitioner has established, by a preponderance of the evidence, that claims 1, 6, 7, 11, 12, 19–21, and 25–31 are unpatentable on the ground of obvious over Ejzak and Intel.

As discussed above in the ground of unpatentability over Ejzak and Cisco, Ejzak discloses each limitation of every challenged claim. Also as discussed above, Ejzak alone would have rendered obvious the subject matter of each challenged claim. Those determinations support a conclusion of obviousness of the same claims over Ejzak and Intel.

Furthermore, for the reasons articulated by Petitioner on pages 21–25 of the Petition, Intel would have suggested to one with ordinary skill in the

art to implement Ejzak's ALG and corresponding BG in a single physical device, even assuming that such a single physical device is required to meet the claims.[10] Patent Owner argues against such a combination to have a unified device, on the basis that Ejzak mentions the importance of freeing the resources of BGs. PO Resp. 13. But a prior art reference must be considered for everything it teaches by way of technology and is not limited to the particular invention it is describing and attempting to protect. *EWP Corp.*, 755 F.2d at 907. The choice of a distributed model Session Border Controller or a unified model Session Border Controller, both of which were well known to one with ordinary skill in the art, represents tradeoff considerations within the level of skill of one with ordinary skill in the art.

E. Patent Owner's Contentions

Claims 1, 26, 28, and 30

For independent claims 1, 26, 28, and 30, Patent Owner presents eight variations of the same argument, i.e., that Ejzak does not disclose "said preceding device connectivity data indicating at least one media connectivity setting for at least one preceding device . . . the at least one media connectivity setting identifying one or more other devices to which the

[10] Intel discloses a Session Border Controller that Petitioner regards as a media gateway (Pet. 21). Patent Owner does not dispute that Intel's Session Border Controller is a media gateway. Intel discloses that its Session Border Controller intercepts and processes calls on a VoIP network, "allowing a single element to monitor not only the signaling traffic but also the media traffic." Ex. 1011, 2.

preceding device is configured to be connectable in said media path."[11] For that central argument, which also applies to all claims depending from claim 1, 26, 28, or 30, the construction of media connectivity setting as discussed above is determinative.

1.

On pages 19–21 of the Patent Owner Response, Patent Owner argues that because the Specification gives three different examples of a media connectivity setting, i.e., a domain identifier, a network identifier, and a gateway identifier, and because a media connectivity setting is defined as describing three things a preceding device can connect to, i.e., a part, a domain, or a region of a telecommunications network, a part, a domain, and a region must be mutually distinct from each other. The argument is unpersuasive, for reasons already explained in the discussion of the claim construction of media connectivity setting, and for additional reasons discussed hereinafter.

Although the Specification sets forth three examples of media connectivity settings, i.e., a domain identifier, a network identifier, and a gateway identifier, Patent Owner does not identify any portion of the Specification indicating that a region of a telecommunication system must be a network, or that a part of a telecommunication system must be a gateway. Nor does Patent Owner identify any portion of the Specification that indicates (1) a network identifier is an example only of identifying a region but not a part of the telecommunication system, or (2) a domain

[11] These are aside from the contention, already addressed and rejected above, that one with ordinary skill would not have implemented Ejzak's ALG and corresponding BG in the form of a single physical device.

identifier is an example only of identifying a domain but not a region or a part of the telecommunication system.

The record does not support Patent Owner's assertion that a part, a domain, and a region of a telecommunication system must be mutually distinct. In particular, we find that a "part" of a telecommunication system does not have to be distinct from a domain or a region of a telecommunication system. Even if a part of a telecommunication system has to be distinct from a domain and a region of a telecommunication system, Patent Owner has not, on pages 19–21 of the Patent Owner Response, explained how that distinction undermines Petitioner's assertion of unpatentability.

2.

On pages 21–23 of the Patent Owner Response, Patent Owner argues that the media connectivity setting as recited in claims 1, 26, 28, and 30 is limited to identifying one or more other devices to which the preceding device is configured to be connectable in the media path. Patent owner explains that this means device-to-other-device connectivity is specifically required, which would not be met by preceding device-to-domain or preceding device-to-region connectivity. PO Resp. 22. The argument is unpersuasive based on our claim construction of "media connectivity setting" and "media connectivity setting identifying one or more other devices" as discussed above. We have determined that a preceding device being connectable to a domain means the preceding device is connectable to devices within the domain, and that a preceding device being connectable to a region of the telecommunication system, such as a network, means the preceding device is connectable to devices within the network. Under

appropriate claim construction, identification of a domain identifies devices within the domain, and identification of a region of a telecommunication system identifies devices within the region. The claims are not as narrow as asserted by Patent Owner.

3.

On pages 23–25 of the Patent Owner Response, Patent Owner contends that Ejzak's "IP realm" is neither a preceding device nor an "other device" to which the preceding device is configured to be connectable in said media path, but is equivalent to a domain as described in the '640 patent. The argument is misplaced. Petitioner has not regarded Ejzak's IP realm as either a preceding device or an "other device" to which a preceding device is configured to be connectable in the media path. Instead, Petitioner regards information in a "traversed realm" field of an SDP offer as media connectivity setting that identifies one or more other devices (within the traversed realm) to which a preceding device, such as a BG, is connectable in the media path. Pet. 28–30, 57. Patent Owner's expert, Mr. Akl, testified that an IP realm includes end point devices that are mutually connectable and share a common IP address space. Ex. 1033, 87:19–88:16.

Patent Owner contends that in Ejzak, the bypass consideration is made at the realm level. PO Resp. 24–25. The argument is ineffective because making a bypass consideration at the realm level is not excluded by the breadth of the challenged claims. Patent Owner asserts that the claimed "media connectivity setting" is specific to devices and not to domains or regions of a telecommunication network. PO Resp. 25. That is not an accurate characterization based on a proper construction of the claims as we have discussed above. A traversed-realm attribute still identifies one or

more other devices, e.g., the devices within an IP realm, to which a preceding BG is configured to be connectable in the media path.

4.

On pages 26–31 of the Patent Owner Response, Patent Owner proposes a hypothetical scenario in which Ejzak's traversed-realm attribute would not cause any media gateway to be bypassed but in which a disclosed embodiment of the '640 patent would. Petitioner notes that such a comparison is irrelevant. Reply 21. We determine that such a comparison is inconsequential and not meaningful. At issue is what is claimed, i.e., the breadth of the claims, and not whether the prior art operates exactly the same as one of the specific and narrow embodiments of the '640 patent. Here, the claims are sufficiently broad to cover the approach taken in Ejzak, despite the fact that that approach is not the same as one of the narrow embodiments disclosed in the '640 patent.

On page 26 of the Patent Owner Response, Patent Owner asserts that the "traversed-realm" data in Ejzak identifies neither a preceding device nor another device to which that preceding device is connectable. The reasoning articulated by Patent Owner is that an IP realm is not a device and that the "traversed-realm attribute" of Ejzak relates to traversed realms and not to traversed devices. The argument is misplaced and unpersuasive.

That an IP realm is not itself a device does not mean it cannot identify one or more devices. Patent Owner states that an "IP realm" is equivalent to a domain as described in the '640 patent. PO Resp. 24. Thus, an IP realm identifies devices in the domain, relative to devices that are not in the domain. The claims do not restrict the particular manner of identification. Also, if the "traversed-realm attribute" is related to a domain, it is related to

the devices within the domain. Patent Owner asserts that Petitioner's expert admitted that an IP realm identifier identifies a realm and not any particular device. PO Resp. 26. We have read the cited testimony of Mr. Bress, and do not find any such admission. In any event, specific identification of a particular device is not required by the claims. The identification required by the claims can be made indirectly and as a group, as explained above.

5.

On pages 31–32 of the Patent Owner Response, Patent Owner asserts that Petitioner's expert "admitted that the 'traversed-realm' attribute only provides information regarding the signaling path, and not the media path." We have reviewed the cited portions of the cross-examination testimony of Mr. Bress, and can see no such admission from Mr. Bress. That the traversed-realm attribute provides connection and port information for prior realm traversed through on the signaling path does not mean the traversed realm provides no information about prior border gateways on the media path. Moreover, Mr. Bress clearly testified that the traversed-realm attribute relates to the media path and cited to Ejzak's disclosure that the traversed-realm attribute is a "media level attribute only." Ex. 2004, 80:17–82:6.

On page 33 of the Patent Owner Response, Patent Owner asserts that one with ordinary skill in the art would not understand the traversed-realm attribute of Ejzak to be media connectivity setting identifying one or more other devices to which the preceding device is configured to be connectable in the media path. The basis of that contention is Patent Owner's apparent assertion that prior IP realms are on the signaling path but not the media path. The argument is unpersuasive. First, Patent Owner's expert, Mr. Akl, has testified that "Ejzak describes that its IP realms and associated border

gateways are on the media path." Ex. 1033, 93:15–18. Second, Petitioner has identified a multitude of disclosures in Ejzak that describes IP realms as being located and traversed on the media path. Reply 18–20. Additionally, Ejzak expressly states: "The traversed-realm attribute is a media-level attribute only. It contains an IP realm identifier and IP address for a previously traversed through realm that can potentially be used to bypass allocated BGs." Ex. 1003 ¶ 123. Based on such information in the record, we find that traversed-realms are connectable on the media path.

6.

On pages 33–35 of the Patent Owner Response, Patent Owner argues that identifying an IP realm comprising a set of mutually reachable IP endpoints that share a common IP addressing scheme is not the same as identifying a particular device in a telecommunication network that is connectable to, but not otherwise in, a preceding IP realm. The argument is misplaced. As is noted by Petitioner (Reply 17), the claims do not require that the media connectivity setting identify a "particular" device, much less one that is connectable to, but not otherwise in, a preceding IP realm.

That a media connectivity setting need not specifically identify any particular device is explained above in the claim construction portion of this decision. That such a particular device additionally must not be one that is connectable to, but not otherwise in, a preceding IP realm is further without basis in the claims. Patent Owner makes no meaningful explanation for this additional "not otherwise in a preceding IP realm" requirement.

7.

On pages 35–36 of the Patent Owner Response, Patent Owner revisits claim construction of "media connectivity setting" by citing to *Straight Path*

IP Group, Inc. v. Sipnet EU S.R.O., 806 F.3d 1356, 1361 (Fed. Cir. 2015), for the proposition that a facially clear and plain meaning of a claim term should not be contradicted even by resort to consideration of the specification. *Straight Path*, however, is inapposite to the situation here. The premise to the principle articulated in that case is that the claim language has a plain meaning that leaves no genuine uncertainties on interpretive questions relevant to the case. Even then, the case indicates only that the specification plays a more limited role, and not that the specification would not be considered. *Id.*

Here, the language at issue does not have such facially clear meaning that leaves no genuine uncertainties on interpretive questions. For instance, on this record the term "media connectivity setting" is not a term of art with a well-established conventional meaning. Also, *Straight Path* identifies two exceptions to the principle articulated therein, one of which is the existence of a definition provided in the specification. *Id.* We have essentially such a definition in the Specification for "media connectivity setting." Ex. 1001, 11:38–48. Additionally, there is no plain meaning on how specific an "identification" has to be. The degree of specificity in question leaves genuine uncertainties on interpretive questions.

8.

On page 37 of the Patent Owner Response, Patent Owner presents an argument directed to a limitation recited in claims 28 and 30. The argument, however, is based entirely on the underlying assumption that Ejzak does not disclose "preceding device connectivity data indicating at least one media connectivity setting for at least one preceding device . . . the at least on media connectivity setting identifying one or more other devices to which

the preceding device is configured to be connectable in said media path." The underlying assumption is incorrect, for reasons we have discussed above. Accordingly, the argument is unpersuasive.

Claims 25 and 27

Claim 25 depends from claim 1, and claim 27 depends from claim 26. Each of claims 25 and 27 recites not enabling bypass "if an ensuing device in said outbound signaling path" determines that such bypass should not be conducted. Petitioner accounted for this limitation by noting that "an ALG may bypass no BGs if it determines that 'there is no traversed realm instance from the current IP realm that is associated with the media line in the received SDP offer.'" Pet. 53. Patent Owner contends that Petitioner's accounting is inapposite because the limitation at issue requires an ensuing device to not enable bypass of "the *present* BG" and not the present ALG to not enable bypass of its associated BG. PO Resp. 39.

Patent Owner's argument is misplaced. As is explained by Petitioner, in Ejzak an ALG is able to cause no bypass of any BG. That means no BG, whether it is the current BG, i.e., the one associated with the current ALG, or any preceding BG on the media path, would be bypassed. The device making the determination that no preceding BG would be bypassed is an ensuing device further down the chain as is required by the claims. In the context of Ejzak, a decision to bypass or not bypass a BG is made not only by the ALG that is associated with that BG, but also by ensuing ALGs. As is explained by Petitioner:

> Ejzak discloses a network that includes multiple ALG/BG pairs along the signaling and media path, respectively. As Mr. Bress explained, any given ALG may be either "the present" ALG (in

> the language of Claim 1, the "media gateway") or an "ensuing" ALG, depending on the circumstance.

Reply 23–24. We agree with and adopt that reasoning.

Patent Owner further argues that according to Ejzak, the bypass configuration of a BG is associated with a local policy of its associated ALG and not any ensuing device. PO Resp. 39. The argument is misplaced, because the local policy is related to decisions made by the current ALG, and would not govern decisions made by ensuing ALGs.

In any event, a decision by an ensuing device to not bypass a preceding BG would not appear to be inconsistent with or in violation of the local policy of the previous device. Patent Owner has not pointed out any situation in which a decision by an ensuing device to not bypass a preceding BG would conflict with the bypass policy of the preceding device. In that connection, as is noted by Petitioner, Patent Owner's argument is inapposite. Reply 24–25.

Claims 29 and 31

Claim 29 depends from claim 28, and claim 31 depends from claim 30. On pages 40–41 of the Patent Owner Response, patent owner presents an argument directed to a limitation recited in claims 29 and 31. The argument, however, is based on the underlying assumption that Ejzak does not disclose "preceding device connectivity data indicating at least one media connectivity setting for at least one preceding device . . . the at least one media connectivity setting identifying one or more other devices to which the preceding device is configured to be connectable in said media path." The underlying assumption is incorrect, for reasons we have explained above. Accordingly, the argument is unpersuasive.

F. Patent Owner's Motion to Exclude Evidence

Patent Owner filed a Motion to Exclude Evidence, seeking to exclude Exhibits 1034–1037. Paper 23 ("Mot."). Petitioner filed an Opposition. Paper 25 ("Opp."). Patent Owner filed a Reply. Paper 27 ("PO Reply").

1. Exhibits 1034–1036

Exhibits 1034–1036 are claim interpretation documents from related District Court action in the Eastern District of Texas between the parties and involving the '640 patent. Specifically, Exhibit 1034 is Patent Owner's "Opening Claim Construction Brief" before the District Court; Exhibit 1035 is Patent Owner's "Reply Claim Construction Brief" before the District Court; and Exhibit 1036 is the district court's "Claim Construction memorandum and Order."

According to Patent Owner, these documents are irrelevant because in this proceeding Patent Owner has proposed the construction of a phrase that is different from those which were construed in the district court action. Mot. 2–5. Patent Owner explains that in this proceeding it seeks to have construed the phrase "*at least one media connectivity setting identifying one or more other devices*," whereas the term at issue in the District Court action was "media connectivity settings." *Id.* at 3. The argument is unpersuasive. First, what terms the Board construes are not limited by what Patent Owner proposes that the Board construes. Indeed, in the initial decision, we already construed "media connectivity setting." Second, the phrase Patent Owner seeks to have construed includes the term "media connectivity setting." The District Court's determination on "media connectivity settings" and the parties' arguments to the District Court in that regard are not irrelevant.

Also according to Patent Owner, because the rule of broadest reasonable interpretation does not apply in district courts, the claim construction documents from the District Court action are irrelevant. Mot. 5–6. We disagree. Although the rule of broadest reasonable interpretation does not apply in district courts actions, it does not follow that the claim construction documents from the District Court action are irrelevant. For instance, it is not irrelevant whether Patent Owner is urging a claim construction here that is even more restrictive than that it had urged before the District Court.[12] Also, that the Board applies a different claim construction standard than does the District Court does not mean a district court's claim interpretation of the same term is irrelevant. The District Court's construction has value by possibly providing contrast.

Further according to Patent Owner, the claim construction documents from the District Court action should be excluded because they confuse the claim construction issues in the present proceeding. Mot. 6–7. Patent Owner explains that at issue in this proceeding is the meaning of the phrase it proposes to have construed, i.e., "*at least one media connectivity setting identifying one or more other devices*," not "media connectivity setting." *Id.* at 7. As discussed above, however, the phrase proposed by Patent Owner to be construed includes the term "media connectivity setting" the meaning of which also is at issue in this proceeding. The meaning of the larger encompassing phrase is not independent of or entirely separate from the

[12] We have not concluded that Patent Owner is urging a construction in this proceeding that is narrower than what it had contended before the District Court. Patent Owner's focus in this proceeding is on the entire phrase rather than just the term "media connectivity setting."

meaning of "media connectivity setting." We are not persuaded that submission of Exhibits 1034–1036 confuses claim construction in this case.

For the foregoing reasons, with respect to Exhibits 1034–1036, Patent Owner's Motion to Exclude is *denied*.

2. Exhibit 1037

With regard to Exhibit 1037, Patent Owner states:

> Exhibit 1037 is an incomplete transcript of the July 10, 2015 Deposition of Nicholas Larkin [a co-inventor of the '640 patent] in the District Court Litigation. *See generally* Ex. 1037 [Larkin Transcript]. Petitioner relies on Exhibit 1037 regarding Mr. Larkin's understanding of (1) "connectivity data"; (2) "bypass mode data" (as it relates to Claim 8); and (3) "Distributed SBCs." *See* Paper 20 [Reply] at 13 and FN 9. Patent Owner timely objected to this Exhibit on July 14, 2016. *See* Paper 21 [Patent Owner's Objections] at 3–6. Ex. 1037 should be excluded as irrelevant under F.R.E. 402 and excluded under F.R.E. 403 for causing unfair prejudice and confusing the issues.

Mot. 7.

With regard to testimony on "bypass mode data," Patent Owner explains that that term is at issue only for claim 8 and that claim 8 is not involved in this proceeding. Mot. 8. In its Opposition, Petitioner acknowledges that claim 8 is not at issue in this proceeding but asserts that because claim 8 is at issue in related proceeding IPR2015-01457 involving the same parties and the same patent, it chose to file a single common exhibit for both proceedings. Opp. 9. Petitioner identifies no argument in this proceeding for which the testimony sought to be excluded is relevant.

Although IPR2015-01457 is a related proceeding, it is undisputed that Mr. Larkin's testimony regarding "bypass mode data" is irrelevant to this proceeding. However, a motion to exclude is premised on the party who filed the evidence having relied on the evidence in support of a substantive

argument.[13] Here, Patent Owner has not identified any argument of Petitioner which, for support, relies on the evidence sought to be excluded. Accordingly, with respect to those portions of Exhibit 1037 that include Mr. Larkin's testimony regarding "bypass mode data," Patent Owner's Motion to Exclude is *denied*.

With regard to Mr. Larkin's testimony on internet realm information as "connectivity data," Patent Owner asserts that it should be excluded because it unfairly prejudices the Patent Owner. Mot. 7–8. In that regard, Patent Owner explains that the portions produced by Petitioner in Exhibit 1037 are incomplete and additionally "obfuscated by redactions." *Id.* Patent Owner also asserts:

> Critically, the transcript does not provide important context, such as: what document Mr. Larkin is being questioned about; whether or not Mr. Larkin is being [questioned] about "internet realm" in the context of the Ejzak referenced (Ex. 1003 in this proceeding); whether or not Mr. Larkin has ever reviewed the Ejzak reference; whether or not Mr. Larkin is talking about "connectivity data" in the context of the '640 Patent claim language; etc. It is not even clear from what little is provided that Mr. Larkin knows that he is being asked specifically about "internet realms." *See* Ex. 1037 [Larkin Transcript] at 85 ("What about internet realm **or something like that**?") (emphasis added).

Mot. 9.

The above-noted arguments of Patent Owner do not justify, on the basis of prejudice, exclusion of the evidence sought to be excluded. To the extent that any or all of the points made above by Patent Owner undermine

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[13] A motion to exclude evidence must identify where in the record the evidence sought to be excluded was relied upon by an opponent. Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,767 (Aug. 14, 2012).

the persuasiveness of the evidence relied on by Petitioner, and would prejudice Patent Owner if not articulated, Patent Owner had the opportunity to request authorization to file a sur-reply with or without additional clarifying testimony from Mr. Larkin, a co-inventor of the '640 patent. Accordingly, with respect to those portions of Exhibit 1037 that include Mr. Larkin's testimony regarding "connectivity data," Patent Owner's Motion to Exclude is *denied*.[14]

With regard to Mr. Larkin's testimony regarding "Distributed SBCs," Patent Owner argues that it is irrelevant as not responsive to any issue presented in the Patent Owner Response. Mot. 9–10. Citing 37 C.F.R. § 42.23(b), Patent Owner states: "a reply may only respond to arguments raised in corresponding opposition or patent owner response." Mot. 10. This subject is not a matter addressable by way of a motion to exclude. In an Order entered January 29, 2016, we instructed the parties "not to use the Motion to Exclude for any purpose other than admissibility issues under the Federal Rules of Evidence," and stated: "[i]f an issue arises with regard to a paper, such as a reply, being out of scope for that paper, the parties shall contact the Board, in a timely manner, to raise the matter." Paper 14, 2. Patent Owner is not in compliance with that Order.

Patent Owner also asserts that because the testimony regarding "Distributed SBCs" has nothing to do with any argument presented by Patent Owner in the Patent Owner Response, it confuses the issues in this proceeding and should be excluded under Rule 403 of the Federal Rules of

[14] In any event, our claim construction does not change whether or not the testimony of Mr. Larkin regarding internet realm information as "connectivity data" is considered.

Evidence. Mot. 10. We are not confused. It is clear that Patent Owner has not argued in its Patent Owner Response that the claimed subject matter excludes distributed SBCs. During oral argument, counsel for Patent Owner acknowledged that Patent Owner in its Patent Owner Response did not challenge the articulation in the initial decision that each pair of ALG and associated BG in Ejzak constitutes a media gateway. Tr. 48:7–18.

Accordingly, with respect to those portions of Exhibit 1037 that include Mr. Larkin's testimony regarding "Distributed SBCs," Patent Owner's Motion to Exclude is *denied*.[15]

In summary, all aspects of the Motion to Exclude with regard to Exhibit 1037 are deficient. With respect to Exhibit 1037, Patent Owner's Motion to Exclude is *denied*.

III. CONCLUSION

Petitioner has shown, by a preponderance of the evidence, that claims 1, 6, 7, 11, 12, 19–21, and 25–31 are unpatentable as obvious over Ejzak and Cisco.

Petitioner has shown, by a preponderance of the evidence, that claims 1, 6, 7, 11, 12, 19–21, and 25–31 are unpatentable as obvious over Ejzak and Intel.

[15] In any event, our finding that each pair of ALG and BG in Ejzak constitutes a media gateway does not change whether or not Exhibit 1037 is considered.

IV. ORDER

It is

ORDERED that claims 1, 6, 7, 11, 12, 19–21, and 25–31 of the '640 patent are unpatentable; and

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

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