Regarding claim 22, Deshpande discloses a communications link connecting the video router with at least a second video router, wherein the layered video data stream is transmitted over the communications link between the video router and the second video router (fig. 1).

Regarding claim 23, Desphande discloses wherein the layered video data stream is received from another video router (fig. 1)

Regarding claim 24, Desphande discloses a communications link connecting the video router with at least a second video router, wherein the layered video data stream is transmitted over the communications link between the video router and the second video router (fig. 1).

Claim 3, 10, 17 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Deshpande (US 2002/0126698) in view of Li (US 2004/0071083) in view of Itakura (US 7,639,882 aka PCT WO 03/071801 with PCT Pub. Date August 28, 2003) in view of XU (uS 2005/0129123).

Regarding claim 3, 10, 17, Deshpande in view of Li in view of Itakura does not specifically disclose wherein the video router selectively forwards the one or more of the set of enhancement layers based on video processing capabilities of the video receiver.

However, Xu discloses wherein the video router selectively forwards the one or more of the set of enhancement layers based on video processing capabilities of the video receiver ([0015]). It would have been obvious at the time of the invention to incorporate the video processing capabilities into the ation of Deshpande in view of Li in view of Itakura in order to provide clients with video quality that their device is capable of processing.

Response to Arguments

Arguments are moot in view of new grounds of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL HYUN HONG whose telephone number is (571)270-1553. The examiner can normally be reached on M-F 9:00-5:30.

Examiner interviews are available via telephone, in-person, and video conferencing using a [illegible] web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Goodarzi can be reached on (571)272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see https://ppair-my.uspto.gov/pair/PrivatePair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MICHAEL H HONG/
Primary Examiner, Art Unit 2426

Notice of References Cited	Application/Control No. 15/010,573	Applicant(s)/Patent Under Reexamination Van Zijst, Erik	
	Examiner MICHAEL H HONG	Art Unit 2426	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20040071083-A1	04-2004	Li, Qiong	H04N21/631	370/230
*	B	US-20040139219-A1	07-2004	Radha, Hayder	H04N21/64792	709/234
*	C	US-6292512-B1	09-2001	Radha; Hayder	H04N21/6377	375/240.1
*	D	US-20050249240-A1	11-2005	Boyce, Jill Macdonald	H04N19/187	370/469
*	E	US-20040198371-A1	10-2004	Balasubramanian, Srinivasan	H04L1/0009	455/452.2
*	F	US-20020068584-A1	06-2002	Gage, William A.	H04L45/16	455/456.1
*	G	US-7639882-B2	12-2009	Itakura; Eisaburo	H04N21/234327	370/229
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office
PTO-892 (Rev. 01-2001) **Notice of References Cited** Part of Paper No. 20201120

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/010,573	Van Zijst, Erik
	Examiner	**Art Unit**
	MICHAEL H HONG	2426

CPC - Searched*		
Symbol	**Date**	**Examiner**
h04n21/2662, h04n21/234	6/10/2016	MH

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
Inventorship search	6/10/2016	MH
east search	6/10/2016	MH
updated east search	12/21/2016	MH
updated east search	6/22/2017	MH
updated east search	2/5/2018	MH
updated east search	11/26/2018	MH
updated east search	08/04/2019	MH
updated east search	11/20/2020	MH

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/010,573	Van Zijst, Erik
	Examiner	Art Unit
	MICHAEL H HONG	2426

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/010,573	Van Zijst, Erik
	Examiner	**Art Unit**
	MICHAEL H HONG	2426

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/10/2016	12/21/2016	06/22/2017	02/05/2018	11/26/2018	08/04/2019	02/14/2020	11/20/2020	
	1	✓	✓	✓	✓	✓	✓	✓	✓	
	2	✓	✓	-	-	-	-	-	-	
	3	✓	✓	✓	✓	✓	✓	✓	✓	
	4	✓	✓	✓	✓	✓	✓	✓	✓	
	5	✓	✓	✓	✓	✓	✓	✓	-	
	6	✓	✓	✓	✓	✓	✓	✓	✓	
	7	✓	✓	✓	✓	✓	-	-	-	
	8	✓	✓	✓	✓	✓	✓	✓	✓	
	9	✓	✓	-	-	-	-	-	-	
	10	✓	✓	✓	✓	✓	✓	✓	✓	
	11	✓	✓	✓	✓	✓	✓	✓	✓	
	12	✓	✓	✓	✓	✓	✓	✓	-	
	13	✓	✓	✓	✓	✓	✓	✓	✓	
	14	✓	✓	✓	✓	✓	-	-	-	
	15		✓	✓	✓	✓	✓	✓	✓	
	16		✓	-	-	-	-	-	-	
	17		✓	✓	✓	✓	✓	✓	✓	
	18		✓	✓	✓	✓	✓	✓	✓	
	19		✓	✓	✓	✓	✓	✓	-	
	20		✓	✓	✓	✓	✓	✓	✓	
	21		✓	✓	✓	✓	-	-	-	
	22				✓	✓	✓	✓	✓	
	23				✓	✓	✓	✓	✓	
	24				✓	✓	✓	✓	✓	

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1,053	(scalable with router)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/03 15:09
S2	763	S1 and protocol	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/03 15:57
S3	0	WO-04010250-$.did.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/09 16:34
S4	2	WO-2004010250-$.did.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/09 16:34
S5	0	@ad<"20050126" and router same (enhancement$1 adj layer$1) same bandwidth same (scaling or scaleable or scale)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/09 17:13
S6	4	@ad<"20050126" and router same (enhancement$1 adj layer$1) same (scaling or scaleable or scale)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/09 17:20
S7	30	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same (scaling or scaleable or scale)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 14:58
S8	11	S7 and priority	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:10
S9	3	S8 and TCP	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:10
S10	3	S8 and TCP$3	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:10
S11	0	@ad<"20050126" and 1/2662.cpc	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:15
S12	842	@ad<"20050126" and h04n21/2662.cpc.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:15
S13	65	@ad<"20050126" and h04n21/234.cpc.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:16

S14	343	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 11:48
S15	30	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same priority	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 11:48
S16	68	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same (scaling or scalable or scale) and priority	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 11:50
S17	15	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same (scaling or scalable or scale) same priority	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 11:51
S18	21	@ad<"20050126" and (enhancement$1 adj layer$1) same scale$1 same (processing)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:25
S19	0	@ad<"20050126" and (enhancement$1 adj layer$1) same scale$1 same (receiver with power)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:28
S20	0	@ad<"20050126" and (enhancement$1 adj layer$1) same scale$1 same (receiver)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:28
S21	27	@ad<"20050126" and (enhancement$1 adj layer$1) same scale$1 same (display)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:28
S22	71	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same packet$1	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:29
S23	7	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same packet$1 same priority	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:30
S25	2	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same packet$1 same priority and (retransmit or retransmission)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:31
S26	5	(US-20040198371-$ or US-20020006161-$ or US-20030072376-$ 20030206558-$ or US- 164987-$).did.	US-PGPUB	OR	OFF	2016/06/12 12:33
S27	1	S26 and tcp	US-PGPUB	OR	OFF	2016/06/12 12:33
S28	7	@ad<"20050126" and (enhancement$1 adj layer$1) same packet$1 same priority and (retransmit or retransmission)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 13:06

S29	4	S28 and tcp	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 13:08
S30	762	@ad<"20050126" and (enhancement$1 adj layer$1) same video	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/12/20 14:38
S31	23	@ad<"20050126" and ((send or forward or transmit) near2 (enhancement$1 adj layer$1)) same video	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/12/20 14:39
S32	5	@ad<"20050126" and ((send or forward or transmit) near2 (enhancement$1 adj layer$1)) same processing	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/12/21 13:15
S33	3	("20060190641" | "4422171" | "6061399").PN.	US-PGPUB; USPAT	OR	OFF	2016/12/21 13:25
S34	7	("20030023746" | "20030152076" | "5432798" | "5926758" | "6426944" | "6621799" | "7151762").PN.	US-PGPUB; USPAT	OR	OFF	2016/12/21 13:25
S35	2	"6275531".pn.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2017/09/08 10:35
S36	76	@ad<"20050126" and (multicast$3) same (enhancement adj layer$1) same (base adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 11:26
S37	35	@ad<"20050126" and (multicast$3) same (enhancement adj layer$1) same (base adj layer$1) same (bandwidth or congestion)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 11:33
S38	3	"6275531".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2018/11/26 12:32
S39	1	@ad<"20050126" and (multicast$3) same (enhancement adj layer$1) same (base adj layer$1) same (throughput)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:20
S40	4	@ad<"20050126" and (multicast$3) same (enhancement adj layer$1) same adj layer$1) same (congest$3)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:21
		ad<"20050126" and (node or router or server) same (enhancement adj layer$1) same (base adj layer$1) same (bandwidth or congestion) and (IP adj multicast$3)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:40
S42	27	@ad<"20050126" and (node or router or server) same (enhancement adj layer$1) same (base adj layer$1) same	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:43

		(bandwidth or congestion) and (multicast$3)				
S43	29	@ad<"20050126" and (node or router or server or transmitter) same (enhancement adj layer$1) same (base adj layer$1) same (bandwidth or congestion) and (multicast$3)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:44
S45	22	@ad<"20050126" and (adapt$5) same (enhancement adj layer$1) same (base adj layer$1) same (bandwidth or congestion) and (multicast$3)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:54
S46	2	"20060168632".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2018/11/26 14:00
S47	4	@ad<"20050126" and (transmitter) same (enhancement adj layer$1) same (base adj layer$1) same (bandwidth or congestion) and (multicast$3)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:35
S48	0	vickers.in. and (adaptive adj multicast)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:38
S49	0	@ad<"20050126" and (adaptive adj multicast$3) same (bandwidth or congestion) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:38
S50	0	@ad<"20050126" and (adaptive with multicast$3) same (bandwidth or congestion) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:38
S51	1	@ad<"20050126" and (adaptive with multicast$3) same (bandwidth or congestion) same (base adj layer) same (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:39
S52	1	@ad<"20050126" and (multicast$3) same (bandwidth or congestion) same (base adj layer) same (enhancement adj layer$1) same feedback	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:40
S53	0	@ad<"20050126" and (multicast$3) (bandwidth or congestion) same ase adj layer) same (enhancement adj layer) same priorit$4	US-PGPUB; USPAT; EPO DERWENT	OR	OFF	2018/11/26 15:42
S54	6	@ad<"20050126" and (multicast$3) same (bandwidth or congestion) same (base adj layer) same (enhancement adj layer) and priorit$4	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 15:44

S55	28	@ad<"20050126" and (multicast$3) and (bandwidth or congestion) same (base adj layer) same (enhancement adj layer) and priorit$4	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 15:47
S56	7	@ad<"20050126" and boyce.in. and (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 16:09
S57	1	WO-3104935-$.did.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 16:09
S58	0	@ad<"20050126" and (multicast$3) same (processing adj (power or capabilit$3)) same (base adj layer) same (enhancement adj layer) and priorit$4	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:00
S59	2	@ad<"20050126" and (multicast$3) same (processing adj (power or capabilit$3)) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:01
S60	9	@ad<"20050126" and (multicast$3) same (client) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:01
S61	0	@ad<"20050126" and (multicast$3) same (client near2 power) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:03
S62	7	@ad<"20050126" and (multicast$3) same (processing) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:03
S63	7	@ad<"20050126" and (multicast$3) same (resolution) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:04
S64	7	@ad<"20050126" and (processing$1 adj (power or capabilit$3)) same (base adj layer) same (enhancement adj layer) and multicast$3	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:09
S65	2	"20040139219".pn.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:20
		"292512".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2018/11/26 22:58
S67	1,741	@ad<"20050126" and ("TCP/IP" with mobile)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:14

S68	0	@ad<"20050126" and ("TCP/IP" with (mobile adj broadcast))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:15
S69	157	@ad<"20050126" and ("TCP/IP" with (mobile adj station$1))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:15
S70	2	@ad<"20050126" and ("TCP/IP" with (router) with "mobile station")	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:22
S71	27	@ad<"20050126" and ("TCP/IP" with (router) with "mobile")	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:23
S72	44	@ad<"20050126" and ("TCP/IP" with (video) with "mobile")	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:26
S73	65	@ad<"20050126" and ("TCP/IP" with (radio adj network))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:36
S74	23	@ad<"20050126" and ("TCP/IP" with (radio or air) with video)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:48
S75	41	@ad<"20050126" and ("TCP/IP" with (radio or air) same video)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:49
S76	136	@ad<"20050126" and ("TCP/IP" with (radio or air) same station)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:55
S77	43	@ad<"20050126" and (overlay adj multicast)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 14:02
S78	0	@ad<"20050126" and (overlay adj multicast) same (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 14:03
S79	0	@ad<"20050126" and (overlay with multicast) same (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 22:52
S80	68	@ad<"20050126" and (multicast) same (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 22:52
[illegible]	[illegible]	@ad<"20050126" and (multicast) same (enhancement adj layer$1) and (p2p or (peer adj to adj peer))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 22:54
S82	18	@ad<"20050126" and (multicast) and (enhancement adj layer$1) and (p2p or ("peer-to-peer"))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 22:55

S83	9	@ad<"20050126" and (multicast) same (p2p or ("peer-to-peer")) and (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/14 08:16
S84	7	@ad<"20050126" and (device) with capabilit$3 with (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/14 12:20
S85	2	"20040071083".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2020/11/19 16:06
S86	21	@ad<"20050126" and (sequence adj number$1) and (identifier near2 layer$1) with packet	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/11/19 16:11
S87	6	@ad<"20050126" and (sequence adj number$1) same (layer near identifier$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/11/19 16:48
S88	10	@ad<"20050126" and (sequence adj number$1) and (layer near identifier$1) same packet$1	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/11/19 17:02
S89	37	@ad<"20050126" and (sequence adj number$1) and (layer near identifier$1) and packet$1	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/11/19 17:18
S90	25	@ad<"20050126" and (sequence adj number$1) and (layer near identifier$1) and packet$1 and (quality or resolution)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/11/19 17:18

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Courtesy Reminder for
Application Serial No: 15/010,573

Attorney Docket No: GEQUI.00108
Customer Number: 122200
Date of Electronic Notification: 11/24/2020

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Electronic Acknowledgement Receipt

EFS ID:	41730156
Application Number:	15010573
International Application Number:	
Confirmation Number:	9731
Title of Invention:	LAYERED MULTICAST AND FAIR BANDWIDTH ALLOCATION AND PACKET PRIORITIZATION
First Named Inventor/Applicant Name:	Erik Van Zijst
Customer Number:	122200
Filer:	James H. Ortega/Jana Sanders
Filer Authorized By:	James H. Ortega
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Time Stamp:	13:53:35
Application Type:	Utility under 35 USC 111(a)

[illegible]ion:

[illegible]nt	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Response After Final Action	GEQUI00108_RFOA.pdf	223193 5a8fe5b1182cdd7ad087fc37628f7de22bde9fcd	no	21

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National Stage of an International Application under 35 U.S.C. 371
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New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:	ZIJST, Eric Van
Applicant:	Blitz Stream Video, LLC
Serial Number:	15/010,573
Filing Date:	January 29, 2016
Title:	Layered Multicast and Fair Bandwidth Allocation and Packet Prioritization
Confirmation No.:	9731
Examiner:	HONG, Michael Hyun
Art Unit:	2426
Attorney File:	GEQUI.00108

RESPONSE TO FINAL OFFICE ACTION

This paper is being filed responsive to a final Office Action mailed November 24, 2020. Applicant notes that the three-month deadline for filing a response expires on February 24, 2021; thus, this response is timely. In addition, this response to a final rejection is being filed within the two-month response deadline as measured from the November 24, 2020 mailing date of the final Office Action, which is January 24, 2021. Since January 24, 2021 falls on a Sunday, this two- eadline carries over to Monday, January 25 ıis response is being filed within the shortened two-month deadline in accordance with the after-final practice set forth in M.P.E.P. 706.07(f).

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A video router, comprising:

a memory; and

a processor, wherein the processor executes instructions stored in the memory to cause the video router to:

receive a layered video data stream including a base layer and a set of enhancement layers,

identify bandwidth-limited conditions of an internet protocol network between the video router and a plurality of video receivers,

forward the base layer from the video router to at least two of the plurality of video receivers via the internet protocol network, and

selectively forward one or more of the set of enhancement layers, but fewer than all of the set of enhancement layers, to at least two of the plurality of video receivers through the internet protocol network based upon the identified bandwidth-limited conditions, and wherein the video router transmits the layered video data stream according to an internet protocol;

wherein each layer of the layered video data stream comprises data packets, each of ich is encoded with a sequence number and r, and wherein the layer identifier for each data packet is based upon a layer to which the packet belongs.

2. (Cancelled)

3. (Previously Presented) The video router of claim 1, wherein the video router further selectively forwards the one or more of the set of enhancement layers based on video processing capabilities of the video receiver.

4. (Previously Presented) The video router of claim 1, wherein the video router divides available bandwidth among a plurality of data streams, and wherein the video router prioritizes forwarding of the set of enhancement layers.

5. (Cancelled)

6. (Currently Amended) The router of claim 1~~5~~, wherein the video router further selectively forwards the one or more of the set of enhancement layers based on a request for retransmission of one or more packets from the layered video data stream.

7. (Cancelled)

8. (Previously Presented) A method for transmitting video signals, the method comprising:

a layered video data stream comprising a b set of enhancement layers;

identifying bandwidth-limited conditions of an internet protocol network between a video router and a plurality of video receivers;

forwarding the base layer to at least two of the plurality of video receivers via the internet protocol network; and

selectively forwarding one or more of the set of enhancement layers, but fewer than all of the set of enhancement layers, to at least two of the plurality of video receivers through the internet protocol network based upon the identified bandwidth-limited conditions,

wherein the layered video data stream is transmitted according to an internet protocol; and

wherein each layer of the layered video data stream comprises data packets, each of which is encoded with a sequence number and a layer identifier, and wherein the layer identifier for each data packet is based upon a layer to which the packet belongs.

9. (Cancelled)

10. (Previously Presented) The method of claim 8, wherein the selectively forwarding step further comprises:

selectively forwarding the one or more of the set of enhancement layers based on video processing capabilities of the video receiver.

11. (Previously Presented) The method of claim 8, further comprising:

vailable bandwidth among a plurality of dat

prioritizing the set of enhancement layers for the selectively forwarding step.

12. (Cancelled)

13. (Previously Presented) The method of claim 8, wherein the selectively forwarding step further comprises:

selectively forwarded the one or more of the set of enhancement layers based on a request for retransmission of one or more data packets from the layered video data stream.

14. (Cancelled)

15. (Previously Presented) A scalable video coding router, comprising:

a memory; and

a processor, wherein the processor executes instructions stored in the memory to cause the scalable video coding router to:

receive a layered video data stream that comprises a base layer and a set of enhancement layers,

identify bandwidth-limited conditions of an internet protocol network between the video router and a set of video receivers;

forward the base layer from the video router to at least two of the set of video receivers; and

wherein the scalable video coding router forwards all of the set of enhancement layers to least two of the video receivers in the set ers with bandwidth-sufficient conditions,

wherein the scalable video coding router selectively forwards one or more of the set of enhancement layers, but fewer than all of the set of enhancement layers, to at least

two of the remaining video receivers in the set of video receivers based upon the identified bandwidth-limited conditions; and

wherein the layered video data stream is transmitted according to an internet protocol, and wherein each layer of the layered video data stream comprises data packets, each of which is encoded with a sequence number and a layer identifier, and wherein the layer identifier for each data packet is based upon a layer to which the packet belongs.

16. (Cancelled)

17. (Previously Presented) The video router of claim 15, wherein the video router further selectively forwards the one or more of the set of enhancement layers based on video processing capabilities of each of the set of video receivers.

18. (Previously Presented) The video router of claim 15, wherein the video router divides available bandwidth among a plurality of data streams, and wherein the video router prioritizes forwarding of the set of enhancement layers.

19. (Cancelled)

esented) The video router of claim 15,

wherein the video router further selectively forwards the one or more of the set of enhancement layers based on a request for retransmission of one or more packets from the layered video data stream.

21. (Cancelled)

22. (Previously Presented) The video router of claim 1, further comprising:

a communications link connecting the video router with at least a second video router, wherein the layered video data stream is transmitted over the communications link between the video router and the second video router.

23. (Previously Presented) The method of claim 8, wherein the layered video data stream is received from another video router.

24. (Previously Presented) The video router of claim 15, further comprising:

a communications link connecting the video router with at least a second video router, wherein the layered video data stream is transmitted over the communications link between the video router and the second video router.

REMARKS

Claims 1, 3-4, 6, 8, 10-11, 13, 15, 17-18, 20 and 22-24 are currently pending in the present application. Claims 2, 5, 7, 9, 12, 14, 16, 19 and 21 were previously canceled. In this response, no claims are amended, and no further claims have been cancelled, added or withdrawn. Accordingly, claims 1, 3, 4, 6, 8, 10, 11, 13, 15, 17, 18, 20 and 22-24 remain pending and under examination in the present application.

Applicant has carefully studied the outstanding Office Action. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of this application is respectfully requested. Applicant respectfully requests reconsideration and withdrawal of the present rejections in view of the following remarks.

I. REJECTIONS UNDER 35 U.S.C. § 103

Multiple grounds of rejection under 35 U.S.C. §103 are set forth in the present Office Action. Each of these grounds of rejections are addressed in turn below.

A. Claims 1, 4, 6, 8, 11, 13, 15, 18, 20 & 22-24

The Office Action has rejected claims 1, 4, 6, 8, 11, 13, 15, 18, 20 & 22-24, of which claims 1, 8 and 15 are independent, under 35 U.S.C. §103 as allegedly being obvious in view of U.S. Patent Publication No. 2002/0126698 to Deshpande in combination with U.S. Patent Publication No. 2004/0071083 to Li, and in view of U.S. Patent No. 7,639,882 to Itakura (aka WO 03071801).

icant respectfully asserts that the cited coml ences does not teach or suggest each and every element of independent claims 1, 8 and 15, and thereby their dependent claims, for at least the reasons discussed below.

In particular, independent claim 1 expressly requires "the video router to":

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> ***identify bandwidth-limited conditions*** of an internet protocol network between the video router and a plurality of video receivers,
>
> ***
>
> ***selectively forward*** one or more of the set of enhancement layers, but fewer than all of the set of enhancement layers, to at least two of the plurality of video receivers through the internet protocol network ***based upon the bandwidth-limited conditions***, and wherein the video router transmits the layered video data stream according to an internet protocol;

These claim elements expressly require the router to "identify bandwidth-limited conditions" and to "selectively forward…fewer than all of the set of enhancement layers…based on **the** bandwidth-limited conditions." As a result, it is clear that **the router** identifies the bandwidth-limited conditions and then **the router** selectively transmits less than all of the layers based on **the** bandwidth-limited conditions identified by **the router**. Independent claims 8 and 15 recite corresponding elements, and thus the arguments set forth for independent claim 1 are equally asserted for independent claims 8 and 15.

1. The Deshpande Reference

The current rejection of claims 1, 8 and 15 asserts that Deshpande is relied upon for disclosing the above-referenced elements of claims 1, 8 and 15, as seen on pages 2-3 of the present Office Action. In particular, Paragraphs [0012, 0013, 0017, 0018, 0023] of Deshpande have been cited in the present Office Action as disclosing the above-identified elements of claims 1, 8 and 15. Therefore, the rejection makes clear that neither Li nor Itakura is asserted to teach these elements of claims 1, 8 and 15. As a result, if it can be shown that Desphande does not disclose claims 1, 8 and 15, then the asserted con hpande with Li and Itakura would not present a *prima facie* case of obviousness of claims 1, 8 or 15. It should be noted that while it is typically improper to attack a reference individually in response to an obviousness rejection based on a combination of references, it is perfectly fine to do so if the

individual reference is the only one relied upon for a specific teaching, since the combination of references could not support the rejection if it is shown that the reference does not in fact disclose that specific teaching. That is the case here.

In contrast to the independent claims, Deshpande does not disclose the elements requiring the router to "identify bandwidth-limited conditions" and then that same router to "selectively forward" less than all of the layers "based on **the** bandwidth-limited conditions" that were identified by that router. Paragraphs [0012, 0013, 0017, 0018, 0023] of Desphande are asserted as teaching these elements of claims 1, 8 and 15, but as discussed below, none of these paragraphs, nor any other portion of Deshpande, teaches or even suggests these elements, and in fact Deshpande specifically teaches against the recited claim elements. For example, starting with cited Para. [0012] of Deshpande, the language therein only refers to the "end systems" managing network traffic:

> [0012] A data processing network comprises a collection of systems or nodes connected by communication links over which information can be transferred between end systems. **End systems** are the devices that permit users to remotely access information over the network. Network applications are typically designed so that one computer or **end system** acts as a server managing network traffic and providing services and data to other end systems or clients attached to the network. On the other hand, network applications can provide for peer-to-peer operation where **end systems** may alternately assume the roles of client or server from time to time. In either event, the data is transferred **between end systems** over a communication channel comprising links with limited data capacity or bandwidth.

Deshpande, Para. [0012] (emphasis added). Nothing in this paragraph discloses that the router, a "end system", both identifies bandwidth-limited conditions of the network and selectively forwards data based on the bandwidth-limited conditions the router itself previously identified. Similarly, cited Para. [0013] does not disclose anything teaching these requirements of independent claims 1, 8 and 15:

> [0013] Referring to FIG. 1, a complex data processing network 20, such as the Internet, comprises a number of connected networks providing a multiplicity of communication links between a source 22 and a plurality of receivers, for example receivers 24, 26, 28, and 30. Each communication channel between a source and an individual receiver or group of receivers is likely to have a reception bandwidth limitation that differs from the bandwidth of other receivers connected to the network. In other words, the bandwidth of the network is heterogeneous. For example, the exemplary source 22 is connected to a first router 32 by a 10 Mbps Ethernet connection 34 (indicated by a bracket). An exemplary first receiver 24 is also connected to the router 32 by a 10 Mbps Ethernet connection 36 (indicated by a bracket) and can receive data at approximately the rate of transmission by the source 22. On the other hand, an exemplary second receiver 26 is also connected to the network by a 10 Mbps Ethernet connection 38 (indicated by a bracket) but has a reception bandwidth that is limited by a 1.544 Mbps T1 link 40 (indicated by a bracket) between the first router 32 and a second router 42 in the communication channel. The reception bandwidth available to an exemplary third receiver 28 and an exemplary fourth receiver 30 are limited by the bandwidth of their respective local access connections to the network, a 128 Kbps ISDN line 44 (indicated by a bracket) and a 33.6 Kbps modem 46 (indicated by a bracket). **Simultaneous transmission to all receivers at a single data rate is likely to be unsatisfactory for most of the receivers. Transmission at the lowest reception data rate would deprive receivers with higher reception bandwidth of the advantages of higher data rates. In the case of video, a higher data rate reduces the distortion of the received video improving its quality. On the other hand, transmission at a higher rate would cause packet loss and loss of quality for receivers with lower reception bandwidth**.

Deshpande, Para. [0013] (emphasis added). As can clearly be seen, this paragraph simply provides a description of a conventional heterogeneous network having multiple routers and receivers having different reception bandwidths. The passage concludes by identifying that problems can exist in a heterogeneous network if all transmissions are made at a single data rate due to the bandwidth limitations at the receivers. If this passage disclosed anything related to either the router

eceivers managing transmissions based on bandwidth limitations, then the final sentences of the paragraph would be absolutely unnecessary since they are identifying the problem of heterogeneous networks if some type of bandwidth management is *not* present. Thus, nothing in this paragraph discloses that the router, rather than any of the "receivers", both identifies

bandwidth-limited conditions of the network and selectively forwards data based on the bandwidth-limited conditions the router itself previously identified. The next cited paragraph of Deshpande is Para. [0017], which sets forth:

> [0017] For example, in the network 20 the source 22 may transmit video encoded from a video source information 48 in four layers; a base layer (0) 50, a second layer (1) 52, a third layer (2) 54, and a fourth layer (3) 56. Since the exemplary first receiver 24 has sufficient reception bandwidth, it can receive all four layers and display video 58 of quality equivalent to that of the video as encoded at the source 48. **On the other hand, the T1 connection 40 limits the bandwidth at the second router 42** and only the first three layers (0, 1, and 2) 50, 52, and 54 are available at the second router 42. **The exemplary second receiver 26 has sufficient reception bandwidth to receive all three layers 50, 52, and 54 available at the second router 42.** Since less data is available at the second receiver 26 to reconstruct the video, it will somewhat distorted (lower quality) when compared to the video "as encoded" at the source. **The reception bandwidth of the exemplary fourth receiver 30 is so limited by the modem connection 46 that it is able to receive only the base layer 50** for the lowest quality display 62, **while the exemplary third receiver 28 can accept two layers (0 and 1) 50 and 52** for a somewhat better quality display 64. **Heterogeneity is *managed by locally degrading* the quality of the *received* signal.**

Deshpande, Para. [0017] (emphasis added). As can clearly be seen, this paragraph provides a description of how the bandwidth limitations of either the connections in the network (e.g., "the T1 connection 40 limits the bandwidth") or of the "reception bandwidth" of a particular receiver limits the reception of such receiver. As such, the passage concludes that what is taught in this paragraph is that "heterogeneity is managed by ***locally*** *degrading the quality of the received signal,*" where locally clearly means at the receiver. Thus, nothing in this paragraph discloses that

than any of the receivers, both identifies l ed conditions of the network and selectively forwards data based on the bandwidth-limited conditions the router itself previously identified. The next cited paragraph of Deshpande is Para. [0018], which sets forth:

> [0018] The **Receiver-driven** Layered Multicast (RLM) protocol and the Layered Video Multicast with Retransmissions (LVMR) protocol provide rate control for multicast receivers **permitting a receiver to adapt its**

> **reception data rate** to the local reception bandwidth **as determined by the static homogeneity of the network link** and dynamic variations in link bandwidth produced by communication channel congestion. During a layered multicast the ***source or server 22 transmits each layer of the layered signal to a separate multicast IP (Internet Protocol) group address and takes no active role in allocating bandwidth.*** On the other hand, by joining or leaving a multicast group and accepting or rejecting data from the multicast group address, **each receiver adapts its reception to the locally available bandwidth by adding or dropping layers of the transmission**. The receiver may join a new group and add a layer of the multicast if spare (additional unused) bandwidth in the network links between the receiver and the source is apparent. **When the *receiver senses* congestion in the communication channel, it drops a layer of the transmission.**

Deshpande, Para. [0018] (emphasis added). As is unmistakable, this paragraph provides express teaching against the required elements of the present claims cited above. Here, Deshpande teaches a "receiver-driven" multicast (RLM), and "permitting a receiver to adapt its reception data rate," and that "each receiver adapts its reception to the locally available bandwidth," and that "when the receiver senses congestion in the communication channel, it drops a layer of the transmission." In fact, completely contrary to and teaching against another requirement in the present claims, Deshpande teaches that "source or server 22 transmits each layer of the layered signal to a separate multicast IP (Internet Protocol) group address and *takes no active role* in allocating bandwidth." To repeat, the "source" takes ***no active role***. Consequently, Applicant cannot fathom how it is not absolutely clear that *every single sentence* in this paragraph completely teaches against the elements of the present claims reciting that the router, rather than any of the receivers, both identifies bandwidth-limited conditions of the network and selectively forwards data based on the

l conditions the router itself previously ide l cited paragraph of

Deshpande is Para. [0023], which sets forth:

> [0023] TCP/IP is commonly used to provide reliable delivery of image, text, and data (pull media) on the Internet. **TCP/IP includes a congestion control mechanism and transmits data at the maximum data rate available**. Since **the receiver is receiving layered push medium data at**

> **near the *reception bandwidth*, the data rate of the TCP/IP transfer of the pull medium will be suppressed and the latency in transferring the image or other pull element will be extended.** The present inventor concluded that to preserve the character of the multimedia session for network clients with heterogeneous reception bandwidth, the bandwidth of the multimedia session should be reallocated during the transmission of a pull medium. In addition, the inventor concluded that the performance of the system could be further improved by suppressing attempts by receivers to increase the number of push medium layers being received during transmission of the pull medium.

Deshpande, Para. [0023] (emphasis added). In the embodiment discussed in this paragraph, although the TCP/IP network includes a congestion control mechanism that transmits data at the maximum available rate, it is the receiver that is once again the component that "suppresses" the *attempted* TCP/IP transfer rate even to the point of extending latency in the transfer since the receiver is receiving data transmission "at near the *reception* bandwidth." Thus, once again nothing in this paragraph discloses that the router, rather than a receiver, both identifies bandwidth-limited conditions of the network and selectively forwards data based on the bandwidth-limited conditions the router itself previously identified.

Even other paragraphs of Deshpande, strategically ignored in the citations to Deshpande, clearly demonstrate how only the receivers in Deshpande are used to control the transmission of layers in a video transmission. For example, Paragraphs [0019] and [0045] of Deshpande clearly teach against the elements of the present claims:

> [0019] When the receiver subscribes to a layer requiring more bandwidth than is available on the links of the network path to the receiver, the communication channel will become congested causing data packets to be ›pped from the data stream degrading the ›ceived data. **Data packet loss can be detected by the receiver and used to instigate dropping of a layer.** On the other hand, available, but unused, reception bandwidth is not readily detectable. **A layered multicast receiver indirectly detects spare reception bandwidth** by periodically performing a "join experiment" in which **the receiver adds the next layer and then measures the effect on data packet loss to determine if it is oversubscribed.** The **receiver continues accepting data packets** from the

> added layer unless or until **it determines** that the packet loss is unacceptable.
>
> [0045] In addition to the adjustment of the push medium layer encoding rates by the server, the present inventor concluded that pull medium reception could be further improved by action at the client. **Operating under the RLM** and LVMR protocols, the **receiver or client can perform a join experiment and attempt to add a push medium layer at any time.**

Deshpande, Paras. [0019, 0045] (emphasis added). In both of these paragraphs, it is once again the receivers that "detect data packet loss," and "detects spare reception bandwidth," and that "adds the next layer and then measures the effect on data packet loss," and that the receiver "continues accepting data packets" unless "it determines that the packet loss is unacceptable." Even the inventor makes sure the reader understands that he is *teaching against router-controlled layer transmission* by concluding his patent by restating his is "operating under RLM" (Receiver-driven Layered Multicast) so that "receiver or client can perform a join experiment and attempt to add a push medium layer at any time." All of the above prove beyond any doubt that Deshpande expressly teaches against the elements of claims 1, 8 and 15 reciting that the router, rather than a receiver, both identifies bandwidth-limited conditions of the network and selectively forwards data based on the bandwidth-limited conditions the router itself previously identified.

For at least the foregoing reasons, the cited combination of Deshpande with Li and Itakura does not teach or suggest all of the elements of independent claims 1, 8 and 15. Thus, independent claims 1, 8 and 15 are not obvious in view of this combination of references, even assuming *arguendo* that both Li and Itakura disclose what they are alleged to disclose. Accordingly, it is

the rejection of these claims has been overcome, and thus Applicant respectfully requests withdrawal of the corresponding rejections to independent claims 1, 8 and 15, as well as their respective rejected dependent claims.

2. The Li Reference

Furthermore, the Office Action now acknowledges that Deshpande does not disclose that the data packets that are transmitted in the layers of the video stream data comprise a sequence number. Thus, Li is cited in combination with Deshpande for allegedly disclosing this missing element of Deshpande. However, a careful review of Li reveals that even in cited Paragraphs [0028, 0030, 0031], Li does not disclose data packets actually having sequence numbers encoded in the data packets.

In Li, adaptive nodes and receivers monitor network congestion conditions, available bandwidth, and other varying channel conditions to vary the number of channels used in transmitting streamed RGS video. Rate-adaptive buffers are used for buffering the packets of the video stream and channels are used or not depending upon detected network conditions. The designated channels for transmission correspond to respective priority layers in the video stream, and both the number of channels used and the data transmission rate per channel are adaptively controlled to optimize video quality for a given set of analyzed network conditions with priority given to the highest priority layer(s). Thus, Li does not disclose "data packets, each of which is encoded with a sequence number" as recited in claims 1, 8, 15. More specifically, while some scheme is required in Li to determine which layers get assigned to which channels, and which packets get dropped within each channel, the specific scheme to actually do so is not specified in Li.

irst at cited Para. [0028], only "labeling" as priority or not is disclosed:

> [0028] Adaptive node 50 may also raise its own retransmission request 110 upstream for packets lost in the transmission to data store 55. When such a missing packet arrives at adaptive node 50, adaptive node 50 may store the missing packet in data store 55 and additionally may expedite forwarding

> of the missing packet downstream with or without **labeling the missing packet with a priority flag**.

Li, Para. [0028] (emphasis added). However, nothing in this cited paragraph of Li discloses or even suggests that data packets should be encoded specifically with a sequence number, as recited in claims 1, 8 and 15. The next cited paragraph of Li is Para. [0030], which sets forth:

> [0030] In a preferred mode, **server 40 assigns** a highest delivery priority for packets comprising base layer 21 and progressively decreases priorities for packets from different enhancement layers 22-25 or channels 32-35 for enhancement layers 22-25. For example, when an adaptive node 50 needs to drop a packet, in a preferred mode it will choose from the those with the lowest priority.

Li, Para. [0030] (emphasis added). Here, all that is indicated is that the server assigns descending levels of priority to the data packets, but as discussed above there is no mention of how this is achieved, and specifically there is no disclosure that data packets should be encoded specifically with a sequence number as recited in claims 1, 8 and 15. Only with the impermissible use of hindsight of the present application would a person of skill in the art learn that, in particular, sequence numbers should be encoded into the data packets, as recited in independent claims 1, 8 and 15. The next cited paragraph of Li is Para. [0031], which sets forth:

> [0031] Referring now additionally to FIG. 5, at step 200, one or more adaptive nodes 50 are logically disposed intermediate server 40 and receiver 60 in a data network, e.g. 100. After FGS processing, server 40 may initiate a plurality of end-to-end communication channels 30 between server 40 and one or more downstream receivers 60 by which server 40 provides encoded video to network 100. In a typical embodiment, **a predetermined channel, e.g. 31, is associated with base layer 21 with an predetermined bandwidth and priority. Additional channels 30 may be associated with enhancement layers 22-25, e.g. channels 32-**

Li, Para. [0031] (emphasis added). Here, Li is implementing his fundamental teaching of assigning particular channels to the transmission of certain layers of the data stream. However, as before nothing in this cited paragraph of Li discloses that data packets should be encoded specifically with a sequence number as recited in claims 1, 8 and 15. Only with the impermissible use of

hindsight of the present application would a person of skill in the art learn that, in particular, sequence numbers should be encoded in the data packets, as recited in independent claims 1, 8 and 15. In fact, regardless of the cited paragraphs of Li, a word search of the text of Li's disclosure reveals that the term "sequence" or some variation thereof is not even present in Li. Thus, it is hard to understand how a person skilled in the art would read the disclosure of Li and learn that, in particular, sequence numbers should be encoded to data packets as recited in claims 1, 8 and 15.

Therefore, in addition to the missing elements of claims 1, 8 and 15 from the Deshpande reference as discussed in detail above, the cited combination of Deshpande and Li with Itakura also does not teach or suggest all of the elements of independent claims 1, 8 and 15 because the element of encoded data packets specifically with a sequence number is missing from Li, and consequently is missing from the combination of Deshpande, Li and Itakura since it is acknowledged that Deshpande does not disclose this claim element and since Itakura is not asserted for disclosing this element. Thus, for this additional reason, independent claims 1, 8 and 15 are not obvious in view of this combination of references, even assuming *arguendo* that both Deshpande and Itakura disclose what they are alleged to disclose. Accordingly, it is believed that the rejection of these claims has been overcome for this reason as well, and thus Applicant again respectfully requests withdrawal of the corresponding rejections to independent claims 1, 8 and 15, as well as their respective rejected dependent claims.

3. No Motivation for Combining the Cited References Can Exist

to the elements of independent claims 1, 8 om the combination of Deshpande, Li and Itakura discussed above, it would furthermore not have been obvious without the benefit of the disclosure or claims of the presently pending application to modify Deshpande to utilize the claimed technology of encoding each layer of the encoded layered video data stream

with sequence numbers, layer identifiers, etc., much less in the particularly claimed manner, much less deploying routers capable of identifying bandwidth condition limitations and then selectively forwarding fewer than all of the set of enhancement layers, because doing so would have added unnecessary overhead and served absolutely no purpose under the teachings of Deshpande since the receivers in Desphande are adapted to receive all layers and to selectively discard one or more received layers based upon detected local bandwidth and/or resource constraints. Put succinctly, since Deshpande is expressly taught as a receiver-based management system, one skilled in the art would not look to the types of systems taught in Li or Itakura for motivation to completely obviate the receiver-driven system of Deshpande. (M.P.E.P. 2143: No motivation to combine references can exist if doing so would render the reference(s) unsatisfactory for its intended purpose). The only possible motivation for attempting to make such a combination that can exist under the rules comes from the disclosure and claims of the present application, which would constitute the impermissible exercise of hindsight to reconstruct the present claims.

Moreover, not only can neither Li nor Itakura be combined with Deshpande since such combination with either render Deshpande's receiver-driven system unsuitable for its intended use, or it would render the source/server-based management systems in Li and Itakura unsuitable for their intended use (*see again*, M.P.E.P. 2143), but even Li and Itakura cannot be combined since they disclose radically different approaches to distributing video over the Internet and are not compatible solutions with one another. Since they each disclose a solution that would render le for its unintended purpose, a person of ould not have even attempted to graft any of the teachings of Li onto Itakura and vice versa.

Accordingly, for these additional reasons, the cited combination of Deshpande with Li and Itakura does not present a prima facie case of obviousness of independent claims 1, 8 and 15.

Thus, independent claims 1, 8 and 15 are not obvious in view of this combination of references. Accordingly, it is again asserted that the rejection of these claims has been overcome, and thus Applicant respectfully requests withdrawal of the corresponding rejections to independent claims 1, 8 and 15, as well as their respective rejected dependent claims.

B. Claims 3, 10 & 17

The Office Action rejects dependent claims 3, 10 and 17 under 35 U.S.C. §103(a) as allegedly being obvious in view of Deshpande in combination with Li and Itakura as applied to independent claims 1, 8 and 15, and further in view of U.S. Patent Publication No. 2005/0129123 to Xu. In response, however, Applicant respectfully asserts that, for at least the reasons discussed above, the combination of Deshpande, Li and Itajura does not render independent claims 1, 8 or 15 obvious. In addition, the Xu reference does not cure the deficiencies of the combination of Deshpande, Li and Itajura and is only cited for allegedly teaching one or more specific limitations recited only in these dependent claims. As a result, the combination of Deshpande, Li and Itajura with Xu does not render independent claim 1, 8 or 15 obvious. Thus, because these dependent claims are dependent on their respective independent claims, this combination of references also does not render these dependent claims obvious since they each include all of the elements of their respective independent claim. Accordingly, Applicant respectfully requests that the rejection with regard to these dependent claims also be withdrawn.

II. CONCLUSION

:tfully urged that the subject application is the references cited by Examiner and is now in condition for allowance. Applicant requests consideration of the application and allowance of the claims. If there are any outstanding issues that the Examiner feels may be resolved by way of a telephone conference, the Examiner is cordially invited to contact

SCALE VIDEO CODING, LLC
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the undersigned Attorney of Record at the contact information provided below.

Applicant notes that the three-month deadline for filing a response expires on February 24, 2021; thus, this response is timely. In addition, this response to a final rejection is being filed within two-month of the November 24, 2020 mailing date of the final Office Action, which is January 24, 2021. Since January 24, 2021 falls on a Sunday, this two-month response deadline carries over to Monday, January 25, 2021. Thus, this response is being filed within the shortened two-month deadline in accordance with the after-final practice set forth in M.P.E.P. 706.07(f). If any fees are believed to be due with the present filing, the Director is authorized to charge any such fees to Deposit Account 50-0392, referencing the Attorney Docket number specified herein.

Respectfully submitted,

By: /James H. Ortega/
James H. Ortega
Registration No. 50,554
Attorney for Applicant

Date: January 25, 2021

CARSTENS & CAHOON, LLP
P.O. Box 802334
Dallas, TX 75380
(972) 367-2001 *Telephone*
(972) 367-2002 *Facsimile*

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PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/010,573	Filing Date 01/29/2016	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $80 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $420 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT	01/25/2021	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 15	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

LIE

y Paid For" IN THIS SPACE is less than 20, enter "20".

/IS/

eviously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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NOTICE OF ALLOWANCE AND FEE(S) DUE

122200 7590 03/03/2021
Carstens & Cahoon, LLP
P.O. Box 802334
Dallas, TX 75380

EXAMINER
HONG, MICHAEL HYUN

ART UNIT	PAPER NUMBER
2426	

DATE MAILED: 03/03/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/010,573	01/29/2016	Erik Van Zijst	GEQUI.00108	9731

TITLE OF INVENTION: LAYERED MULTICAST AND FAIR BANDWIDTH ALLOCATION AND PACKET PRIORITIZATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$600	$0.00	$0.00	$600	06/03/2021

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PTOL-85 (Rev. 02/11)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

122200 7590 03/03/2021
Carstens & Cahoon, LLP
P.O. Box 802334
Dallas, TX 75380

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/010,573	01/29/2016	Erik Van Zijst	GEQUI.00108	9731

TITLE OF INVENTION: LAYERED MULTICAST AND FAIR BANDWIDTH ALLOCATION AND PACKET PRIORITIZATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$600	$0.00	$0.00	$600	06/03/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
HONG, MICHAEL HYUN	2426	725-116000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1_____
2_____
3_____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑Issue Fee ❑Publication Fee (if required) ❑Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ [illegible] ❑ Enclosed check ❑ Non-electronic payment by credi[illegible] -2038)

[illegible] charge the required fee(s), any deficiency, or credit any overpay[illegible] No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/010,573	01/29/2016	Erik Van Zijst	GEQUI.00108	9731

122200 7590 03/03/2021
Carstens & Cahoon, LLP
P.O. Box 802334
Dallas, TX 75380

EXAMINER
HONG, MICHAEL HYUN

ART UNIT	PAPER NUMBER
2426	

DATE MAILED: 03/03/2021

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 02/11)

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

system of records may be disclosed, as a routine us l agency for purposes of
curity review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/010,573	Applicant(s) Van Zijst, Erik	
	Examiner MICHAEL H HONG	Art Unit 2426	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 1/25/21.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are See Continuation Sheet . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit
   _____.
   (PTO-413),
   Paper No./Mail Date _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other .

/MICHAEL H HONG/
Primary Examiner, Art Unit 2426

Continuation of 3. The allowed claim(s) is/are: 1,3-4,6,8,10-11,13,15,17-18,20 and 22-24

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Allowable Subject Matter

1. Claims 1,3-4,6,8,10-11,13,15,17-18,20,22-24 are allowed.

Claims 1,3-4,6,8,10-11,13,15,17-18,20,22-24 are considered allowable since none of the references of record alone or in combination disclose or suggest the combination of limitations specified in independent claim 1, including "video router selectively forward one or more of the set of enhancement layers but fewer than all of the set of enhancement layers to at least two of the plurality of video receivers through the internet protocol network based upon identified bandwidth-limited conditions according to an internet protocol, wherein each layer comprises data packets each of which is encoded with a sequence number and a layer identifier" . Claims 8 and 15 are similar.

The closest prior art (Desphande) teaches receiver based enhancement layer streaming. None of these references disclose "video router selectively forward one or more of the set of enhancement layers but fewer than all of the set of enhancement layers to at least two of the plurality of video receivers through the internet protocol network based upon identified bandwidth-limited conditions according to an internet protocol, wherein each layer comprises data packets each of which is encoded with a sequence number and a layer identifier" Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on

easons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL HYUN HONG whose telephone number is (571)270-1553. The examiner can normally be reached on M-F 9:00-5:30.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Goodarzi can be reached on (571)272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MICHAEL H HONG/
Art Unit 2426

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/010,573	Van Zijst, Erik
	Examiner	**Art Unit**
	MICHAEL H HONG	2426

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/10/2016	12/21/2016	06/22/2017	02/05/2018	11/26/2018	08/04/2019	02/14/2020	11/20/2020	02/24/2021
1	1	✓	✓	✓	✓	✓	✓	✓	✓	=
	2	✓	✓	-	-	-	-	-	-	-
2	3	✓	✓	✓	✓	✓	✓	✓	✓	=
3	4	✓	✓	✓	✓	✓	✓	✓	✓	=
	5	✓	✓	✓	✓	✓	✓	✓	-	-
4	6	✓	✓	✓	✓	✓	✓	✓	✓	=
	7	✓	✓	✓	✓	✓	-	-	-	-
6	8	✓	✓	✓	✓	✓	✓	✓	✓	=
	9	✓	✓	-	-	-	-	-	-	-
7	10	✓	✓	✓	✓	✓	✓	✓	✓	=
8	11	✓	✓	✓	✓	✓	✓	✓	✓	=
	12	✓	✓	✓	✓	✓	✓	✓	-	-
9	13	✓	✓	✓	✓	✓	✓	✓	✓	=
	14	✓	✓	✓	✓	✓	-	-	-	-
11	15		✓	✓	✓	✓	✓	✓	✓	=
	16		✓	-	-	-	-	-	-	-
12	17		✓	✓	✓	✓	✓	✓	✓	=
13	18		✓	✓	✓	✓	✓	✓	✓	=
	19		✓	✓	✓	✓	✓	✓	-	-
14	20		✓	✓	✓	✓	✓	✓	✓	=
	21		✓	✓	✓	✓	-	-	-	-
5	22				✓	✓	✓	✓	✓	=
10	23				✓	✓	✓	✓	✓	=
15	24				✓	✓	✓	✓	✓	=

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/010,573	Van Zijst, Erik
	Examiner	**Art Unit**
	MICHAEL H HONG	2426

CPC - Searched*		
Symbol	**Date**	**Examiner**
h04n21/2662, h04n21/234	6/10/2016	MH

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
Inventorship search	6/10/2016	MH
east search	6/10/2016	MH
updated east search	12/21/2016	MH
updated east search	6/22/2017	MH
updated east search	2/5/2018	MH
updated east search	11/26/2018	MH
updated east search	08/04/2019	MH
updated east search	11/20/2020	MH

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/010,573	Van Zijst, Erik
	Examiner	**Art Unit**
	MICHAEL H HONG	2426

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
USPPGPub	("bandwidth-limited" and "internet protocol" and " enhancement layers" and "sequence number").clm.	02/24/2021	MH

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/010,573	Van Zijst, Erik
	Examiner	**Art Unit**
	MICHAEL H HONG	2426

CPC						
Symbol					**Type**	**Version**
H04N	/	21	/	234327	F	2013-01-01
H04L	/	29	/	12009	I	2013-01-01
H04L	/	29	/	12028	I	2013-01-01
H04L	/	29	/	12801	I	2013-01-01
H04L	/	45	/	00	I	2013-01-01
H04L	/	45	/	02	I	2013-01-01
H04L	/	45	/	04	I	2013-01-01
H04L	/	45	/	12	I	2013-01-01
H04L	/	45	/	123	I	2013-01-01
H04L	/	45	/	18	I	2013-01-01
H04L	/	45	/	302	I	2013-01-01
H04L	/	45	/	48	I	2013-01-01
H04L	/	45	/	64	I	2013-01-01
H04L	/	47	/	10	I	2013-01-01
H04L	/	47	/	11	I	2013-01-01
H04L	/	47	/	15	I	2013-01-01
H04L	/	47	/	2408	I	2013-01-01
H04L	/	47	/	2416	I	2013-01-01
H04L	/	47	/	2441	I	2013-01-01
H04L	/	47	/	30	I	2013-01-01
H04L	/	47	/	32	I	2013-01-01
H04L	/	47	/	34	I	2013-01-01
H04L	/	61	/	103	I	2013-01-01
H04L	/	61	/	6004	I	2013-01-01
H04L	/	12	/	1836	I	2013-01-01
H04L	/	45	/	16	I	2013-01-01
H04L	/	1	/	1874	I	2013-01-01
H04L	/	1	/	1887	I	2013-01-01
H04L	/	43	/	0829	I	2013-01-01
			/	125		2013-01-01
			/	34	I	2014-11-01

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 15	
/MICHAEL H HONG/ Primary Examiner, Art Unit 2426 (Primary Examiner)	24 February 2021 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office

Part of Paper No.: 20210224

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/010,573	Van Zijst, Erik
	Examiner	**Art Unit**
	MICHAEL H HONG	2426

CPC						
Symbol					**Type**	**Version**
H04N	/	19	/	39	I	2014-11-01
H04N	/	21	/	23605	I	2013-01-01
H04N	/	21	/	2383	I	2013-01-01
H04N	/	21	/	6125	I	2013-01-01
H04N	/	21	/	6405	I	2013-01-01
H04N	/	21	/	64322	I	2013-01-01
H04L	/	1	/	18	A	2013-01-01
H04L	/	12	/	1868	A	2013-01-01
H04L	/	12	/	1881	A	2013-01-01
H04N	/	21	/	2662	A	2013-01-01

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 15	
/MICHAEL H HONG/ Primary Examiner, Art Unit 2426 (Primary Examiner)	24 February 2021 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office

Part of Paper No.: 20210224

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/010,573	Van Zijst, Erik
	Examiner	**Art Unit**
	MICHAEL H HONG	2426

INTERNATIONAL CLASSIFICATION				
CLAIMED				
H04N21/2343	/	21	/	2343

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE (Assistant Examiner) (Date)		Total Claims Allowed: 15	
/MICHAEL H HONG/ Primary Examiner, Art Unit 2426 (Primary Examiner) (Date)	24 February 2021	O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office Part of Paper No.: 20210224

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/010,573	Van Zijst, Erik
	Examiner	**Art Unit**
	MICHAEL H HONG	2426

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	7	10		19										
	2	8	11	14	20										
2	3		12		21										
3	4	9	13	5	22										
	5		14	10	23										
4	6	11	15	15	24										
	7		16												
6	8	12	17												
	9	13	18												

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 15	
/MICHAEL H HONG/ Primary Examiner, Art Unit 2426 (Primary Examiner)	24 February 2021 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office Part of Paper No.: 20210224

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1,053	(scalable with router)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/03 15:09
S2	763	S1 and protocol	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/03 15:57
S3	0	WO-04010250-$.did.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/09 16:34
S4	2	WO-2004010250-$.did.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/09 16:34
S5	0	@ad<"20050126" and router same (enhancement$1 adj layer$1) same bandwidth same (scaling or scaleable or scale)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/09 17:13
S6	4	@ad<"20050126" and router same (enhancement$1 adj layer$1) same (scaling or scaleable or scale)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/09 17:20
S7	30	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same (scaling or scaleable or scale)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 14:58
S8	11	S7 and priority	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:10
S9	3	S8 and TCP	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:10
S10	3	S8 and TCP$3	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:10
S11	0	@ad<"20050126" and 1/2662.cpc	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:15
S12	842	@ad<"20050126" and h04n21/2662.cpc.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:15
S13	65	@ad<"20050126" and h04n21/234.cpc.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/10 15:16

S14	343	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 11:48
S15	30	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same priority	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 11:48
S16	68	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same (scaling or scalable or scale) and priority	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 11:50
S17	15	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same (scaling or scalable or scale) same priority	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 11:51
S18	21	@ad<"20050126" and (enhancement$1 adj layer$1) same scale$1 same (processing)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:25
S19	0	@ad<"20050126" and (enhancement$1 adj layer$1) same scale$1 same (receiver with power)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:28
S20	0	@ad<"20050126" and (enhancement$1 adj layer$1) same scale$1 same (receiver)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:28
S21	27	@ad<"20050126" and (enhancement$1 adj layer$1) same scale$1 same (display)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:28
S22	71	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same packet$1	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:29
S23	7	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same packet$1 same priority	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:30
S25	2	@ad<"20050126" and (enhancement$1 adj layer$1) same bandwidth same packet$1 same priority and (retransmit or retransmission)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 12:31
S26	5	(US-20040198371-$ or US-20020006161-$ or US-20030072376-$ 20030206558-$ or US- 164987-$).did.	US-PGPUB	OR	OFF	2016/06/12 12:33
S27	1	S26 and tcp	US-PGPUB	OR	OFF	2016/06/12 12:33
S28	7	@ad<"20050126" and (enhancement$1 adj layer$1) same packet$1 same priority and (retransmit or retransmission)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 13:06

S29	4	S28 and tcp	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/06/12 13:08
S30	762	@ad<"20050126" and (enhancement$1 adj layer$1) same video	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/12/20 14:38
S31	23	@ad<"20050126" and ((send or forward or transmit) near2 (enhancement$1 adj layer$1)) same video	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/12/20 14:39
S32	5	@ad<"20050126" and ((send or forward or transmit) near2 (enhancement$1 adj layer$1)) same processing	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2016/12/21 13:15
S33	3	("20060190641" | "4422171" | "6061399").PN.	US-PGPUB; USPAT	OR	OFF	2016/12/21 13:25
S34	7	("20030023746" | "20030152076" | "5432798" | "5926758" | "6426944" | "6621799" | "7151762").PN.	US-PGPUB; USPAT	OR	OFF	2016/12/21 13:25
S35	2	"6275531".pn.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2017/09/08 10:35
S36	76	@ad<"20050126" and (multicast$3) same (enhancement adj layer$1) same (base adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 11:26
S37	35	@ad<"20050126" and (multicast$3) same (enhancement adj layer$1) same (base adj layer$1) same (bandwidth or congestion)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 11:33
S38	3	"6275531".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2018/11/26 12:32
S39	1	@ad<"20050126" and (multicast$3) same (enhancement adj layer$1) same (base adj layer$1) same (throughput)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:20
S40	4	@ad<"20050126" and (multicast$3) same (enhancement adj layer$1) same adj layer$1) same (congest$3)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:21
		ad<"20050126" and (node or router or server) same (enhancement adj layer$1) same (base adj layer$1) same (bandwidth or congestion) and (IP adj multicast$3)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:40
S42	27	@ad<"20050126" and (node or router or server) same (enhancement adj layer$1) same (base adj layer$1) same	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:43

		(bandwidth or congestion) and (multicast$3)				
S43	29	@ad<"20050126" and (node or router or server or transmitter) same (enhancement adj layer$1) same (base adj layer$1) same (bandwidth or congestion) and (multicast$3)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:44
S45	22	@ad<"20050126" and (adapt$5) same (enhancement adj layer$1) same (base adj layer$1) same (bandwidth or congestion) and (multicast$3)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 13:54
S46	2	"20060168632".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2018/11/26 14:00
S47	4	@ad<"20050126" and (transmitter) same (enhancement adj layer$1) same (base adj layer$1) same (bandwidth or congestion) and (multicast$3)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:35
S48	0	vickers.in. and (adaptive adj multicast)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:38
S49	0	@ad<"20050126" and (adaptive adj multicast$3) same (bandwidth or congestion) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:38
S50	0	@ad<"20050126" and (adaptive with multicast$3) same (bandwidth or congestion) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:38
S51	1	@ad<"20050126" and (adaptive with multicast$3) same (bandwidth or congestion) same (base adj layer) same (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:39
S52	1	@ad<"20050126" and (multicast$3) same (bandwidth or congestion) same (base adj layer) same (enhancement adj layer$1) same feedback	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 14:40
S53	0	@ad<"20050126" and (multicast$3) (bandwidth or congestion) same ase adj layer) same (enhancement adj layer) same priorit$4	US-PGPUB; USPAT; EPO DERWENT	OR	OFF	2018/11/26 15:42
S54	6	@ad<"20050126" and (multicast$3) same (bandwidth or congestion) same (base adj layer) same (enhancement adj layer) and priorit$4	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 15:44

S55	28	@ad<"20050126" and (multicast$3) and (bandwidth or congestion) same (base adj layer) same (enhancement adj layer) and priorit$4	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 15:47
S56	7	@ad<"20050126" and boyce.in. and (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 16:09
S57	1	WO-3104935-$.did.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 16:09
S58	0	@ad<"20050126" and (multicast$3) same (processing adj (power or capabilit$3)) same (base adj layer) same (enhancement adj layer) and priorit$4	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:00
S59	2	@ad<"20050126" and (multicast$3) same (processing adj (power or capabilit$3)) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:01
S60	9	@ad<"20050126" and (multicast$3) same (client) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:01
S61	0	@ad<"20050126" and (multicast$3) same (client near2 power) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:03
S62	7	@ad<"20050126" and (multicast$3) same (processing) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:03
S63	7	@ad<"20050126" and (multicast$3) same (resolution) same (base adj layer) same (enhancement adj layer)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:04
S64	7	@ad<"20050126" and (processing$1 adj (power or capabilit$3)) same (base adj layer) same (enhancement adj layer) and multicast$3	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:09
S65	2	"20040139219".pn.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2018/11/26 17:20
		"292512".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2018/11/26 22:58
S67	1,741	@ad<"20050126" and ("TCP/IP" with mobile)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:14

S68	0	@ad<"20050126" and ("TCP/IP" with (mobile adj broadcast))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:15
S69	157	@ad<"20050126" and ("TCP/IP" with (mobile adj station$1))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:15
S70	2	@ad<"20050126" and ("TCP/IP" with (router) with "mobile station")	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:22
S71	27	@ad<"20050126" and ("TCP/IP" with (router) with "mobile")	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:23
S72	44	@ad<"20050126" and ("TCP/IP" with (video) with "mobile")	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:26
S73	65	@ad<"20050126" and ("TCP/IP" with (radio adj network))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:36
S74	23	@ad<"20050126" and ("TCP/IP" with (radio or air) with video)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:48
S75	41	@ad<"20050126" and ("TCP/IP" with (radio or air) same video)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:49
S76	136	@ad<"20050126" and ("TCP/IP" with (radio or air) same station)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2019/08/04 21:55
S77	43	@ad<"20050126" and (overlay adj multicast)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 14:02
S78	0	@ad<"20050126" and (overlay adj multicast) same (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 14:03
S79	0	@ad<"20050126" and (overlay with multicast) same (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 22:52
S80	68	@ad<"20050126" and (multicast) same (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 22:52
[illegible]	[illegible]	@ad<"20050126" and (multicast) same (enhancement adj layer$1) and (p2p or (peer adj to adj peer))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 22:54
S82	18	@ad<"20050126" and (multicast) and (enhancement adj layer$1) and (p2p or ("peer-to-peer"))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/13 22:55

S83	9	@ad<"20050126" and (multicast) same (p2p or ("peer-to-peer")) and (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/14 08:16
S84	7	@ad<"20050126" and (device) with capabilit$3 with (enhancement adj layer$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/02/14 12:20
S85	2	"20040071083".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2020/11/19 16:06
S86	21	@ad<"20050126" and (sequence adj number$1) and (identifier near2 layer$1) with packet	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/11/19 16:11
S87	6	@ad<"20050126" and (sequence adj number$1) same (layer near identifier$1)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/11/19 16:48
S88	10	@ad<"20050126" and (sequence adj number$1) and (layer near identifier$1) same packet$1	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/11/19 17:02
S89	37	@ad<"20050126" and (sequence adj number$1) and (layer near identifier$1) and packet$1	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/11/19 17:18
S90	25	@ad<"20050126" and (sequence adj number$1) and (layer near identifier$1) and packet$1 and (quality or resolution)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2020/11/19 17:18
S91	1	"7639882".pn. and (layer near2 identifier)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2020/11/20 08:21

2/24/2021 10:40:21 PM
C:\Users\hhong1\Documents\EAST\Workspaces\15010573.wsp

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:	ZIJST, Eric Van
Applicant:	Blitz Stream Video, LLC
Serial Number:	15/010,573
Filing Date:	January 29, 2016
Title:	Layered Multicast and Fair Bandwidth Allocation and Packet Prioritization
Confirmation No.:	9731
Examiner:	HONG, Michael Hyun
Art Unit:	2426
Attorney File:	GEQUI.00108

RESPONSE TO FINAL OFFICE ACTION

This paper is being filed responsive to a final Office Action mailed November 24, 2020. Applicant notes that the three-month deadline for filing a response expires on February 24, 2021; thus, this response is timely. In addition, this response to a final rejection is being filed within the two-month response deadline as measured from the November 24, 2020 mailing date of the final Office Action, which is January 24, 2021. Since January 24, 2021 falls on a Sunday, this two- eadline carries over to Monday, January 25 is response is being filed within the shortened two-month deadline in accordance with the after-final practice set forth in M.P.E.P. 706.07(f).

Bibliographic Data

Application No: 15/010,573

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No | ☐ Met After Allowance

Verified and Acknowledged: _____ | _____

Examiner's Signature | Initials

Title: LAYERED MULTICAST AND FAIR BANDWIDTH ALLOCATION AND PACKET PRIORITIZATION

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
01/29/2016 **RULE**	725	2426	GEQUI.00108

APPLICANTS

Blitz Stream Video, LLC, Plano, TX, UNITED STATES

INVENTORS

Erik Van Zijst, Belmont, CA, UNITED STATES

CONTINUING DATA

This application is a DIV of 13619969 09/14/2012 PAT 9414094

13619969 is a CON of 12486656 06/17/2009 PAT 8514718

12486656 is a DIV of 11342167 01/26/2006 PAT 7733868

11342167 has PRO of 60647601 01/26/2005

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

02/12/2016

** SMALL ENTITY **

STATE OR COUNTRY

UNITED STATES

Carstens & Cahoon, LLP
P.O. Box 802334
Dallas, TX 75380
UNITED STATES

FILING FEE RECEIVED

$2,800

Electronic Acknowledgement Receipt

EFS ID:	42254951
Application Number:	15010573
International Application Number:	
Confirmation Number:	9731
Title of Invention:	LAYERED MULTICAST AND FAIR BANDWIDTH ALLOCATION AND PACKET PRIORITIZATION
First Named Inventor/Applicant Name:	Erik Van Zijst
Customer Number:	122200
Filer:	James H. Ortega/Jana Sanders
Filer Authorized By:	James H. Ortega
Attorney Docket Number:	GEQUI.00108
Receipt Date:	23-MAR-2021
Filing Date:	29-JAN-2016
Time Stamp:	18:17:38
Application Type:	Utility under 35 USC 111(a)

[illegible]ion:

[illegible]nt	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment after Notice of Allowance (Rule 312)	GEQUI00108_312Amend.pdf	110803 93684376230e01a64322b983ab8407b9ba9b2cc	no	8

Warnings:

Information:	
Total Files Size (in bytes):	110803

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:	ZIJST, Eric Van
Applicant:	Blitz Stream Video, LLC
Serial Number:	15/010,573
Filing Date:	January 29, 2016
Title:	Layered Multicast and Fair Bandwidth Allocation and Packet Prioritization
Confirmation No.:	9731
Examiner:	HONG, Michael Hyun
Art Unit:	2426
Attorney File:	GEQUI.00108

AMENDMENT AFTER NOTICE OF ALLOWANCE UNDER 37 C.F.R. 1.312

This Amendment is being filed after receipt of the Notice of Allowance and before payment of the Issue Fee under 37 C.F.R. 1.312.

SCALE VIDEO CODING, LLC
v. CISCO SYSTEMS, INC.
IPR2024-01371
Ex. 1002, p. 803 of 830

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A video router, comprising:

a memory; and

a processor, wherein the processor executes instructions stored in the memory to cause the video router to:

receive a layered video data stream including a base layer and a set of enhancement layers,

identify bandwidth-limited conditions of an internet protocol network between the video router and a plurality of video receivers,

forward the base layer from the video router to at least two of the plurality of video receivers via the internet protocol network, and

selectively forward one or more of the set of enhancement layers, but fewer than all of the set of enhancement layers, to at least two of the plurality of video receivers through the internet protocol network based upon the identified bandwidth-limited conditions, and wherein the video router transmits the layered video data stream according to an internet protocol;

wherein each layer of the layered video data stream comprises data packets, each of ich is encoded with a sequence number and r, and wherein the layer identifier for each data packet is based upon a layer to which the packet belongs.

2. (Cancelled)

3. (Previously Presented) The video router of claim 1, wherein the video router further selectively forwards the one or more of the set of enhancement layers based on video processing capabilities of the video receiver.

4. (Previously Presented) The video router of claim 1, wherein the video router divides available bandwidth among a plurality of data streams, and wherein the video router prioritizes forwarding of the set of enhancement layers.

5. (Cancelled)

6. (Previously Presented) The router of claim 1, wherein the video router further selectively forwards the one or more of the set of enhancement layers based on a request for retransmission of one or more packets from the layered video data stream.

7. (Cancelled)

8. (Currently Amended) A method for transmitting video signals, the method comprising:

a layered video data stream comprising a b set of enhancement layers;

identifying bandwidth-limited conditions of an internet protocol network between a video router and a plurality of video receivers;

forwarding the base layer to at least two of the plurality of video receivers via the internet protocol network; and

selectively forwarding one or more of the set of enhancement layers, but fewer than all of the set of enhancement layers, to at least two of the plurality of video receivers through the internet protocol network based upon the identified bandwidth-limited conditions; [[,]]

wherein the layered video data stream is transmitted according to an internet protocol; and

wherein each layer of the layered video data stream comprises data packets, each of which is encoded with a sequence number and a layer identifier, and wherein the layer identifier for each data packet is based upon a layer to which the packet belongs.

9. (Cancelled)

10. (Previously Presented) The method of claim 8, wherein the selectively forwarding step further comprises:

selectively forwarding the one or more of the set of enhancement layers based on video processing capabilities of the video receiver.

11. (Previously Presented) The method of claim 8, further comprising:

vailable bandwidth among a plurality of dat

prioritizing the set of enhancement layers for the selectively forwarding step.

12. (Cancelled)

13. (Currently Amended) The method of claim 8, wherein the selectively forwarding step further comprises:

selectively forwarding ~~forwarded~~ the one or more of the set of enhancement layers based on a request for retransmission of one or more data packets from the layered video data stream.

14. (Cancelled)

15. (Currently Amended) A scalable video coding router, comprising:

a memory; and

a processor, wherein the processor executes instructions stored in the memory to cause the scalable video coding router to:

receive a layered video data stream that comprises a base layer and a set of enhancement layers,

identify bandwidth-limited conditions of an internet protocol network between the video router and a set of video receivers, and[[;]]

forward the base layer from the video router to at least two of the set of video receivers; [[and]]

wherein the scalable video coding router forwards all of the set of enhancement layers to least two of the video receivers in the set ers with bandwidth-sufficient conditions; [[,]]

wherein the scalable video coding router selectively forwards one or more of the set of enhancement layers, but fewer than all of the set of enhancement layers, to at least

two of the remaining video receivers in the set of video receivers based upon the identified bandwidth-limited conditions; [[and]]

wherein the layered video data stream is transmitted according to an internet protocol; [[,]] and

wherein each layer of the layered video data stream comprises data packets, each of which is encoded with a sequence number and a layer identifier, and wherein the layer identifier for each data packet is based upon a layer to which the packet belongs.

16. (Cancelled)

17. (Previously Presented) The video router of claim 15, wherein the video router further selectively forwards the one or more of the set of enhancement layers based on video processing capabilities of each of the set of video receivers.

18. (Previously Presented) The video router of claim 15, wherein the video router divides available bandwidth among a plurality of data streams, and wherein the video router prioritizes forwarding of the set of enhancement layers.

19. (Cancelled)

20. (Previously Presented) The video router of claim 15,

wherein the video router further selectively forwards the one or more of the set of enhancement layers based on a request for retransmission of one or more packets from the layered video data stream.

21. (Cancelled)

22. (Previously Presented) The video router of claim 1, further comprising:

a communications link connecting the video router with at least a second video router, wherein the layered video data stream is transmitted over the communications link between the video router and the second video router.

23. (Previously Presented) The method of claim 8, wherein the layered video data stream is received from another video router.

24. (Previously Presented) The video router of claim 15, further comprising:

a communications link connecting the video router with at least a second video router, wherein the layered video data stream is transmitted over the communications link between the video router and the second video router.

REMARKS

Claims 1, 3, 4, 6, 8, 10, 11, 13, 15, 17, 18, 20 and 22-24 are pending in the present application and have been deemed allowable via a Notice of Allowance mailed March 3, 2021. Applicant submits the present Amendment before payment of the Issue Fee to amend claims 8, 13 and 15 in order to correct certain typographical errors. No new matter has been added. Applicant respectfully requests entry of the amendments under 37 C.F.R. 1.312.

CONCLUSION

No fee is believed to be necessary for the present amendment. In the event that any fees are deemed to be required, the Director is authorized to charge any such fees to Deposit Account 50-0392, referencing the Attorney Docket number specified herein. If there are any outstanding issues that the Examiner feels may be resolved by way of a telephone conference, the Examiner is cordially invited to contact the undersigned Attorney of Record at the contact information provided below.

Respectfully submitted,

By: /James H. Ortega/
James H. Ortega
Registration No. 50,554
Attorney for Applicant

Date: March 23, 2021

CARSTENS & CAHOON, LLP
P.O. Box 802334
)
1 *Telephone*
(972) 367-2002 *Facsimile*

SCALE VIDEO CODING, LLC
v. CISCO SYSTEMS, INC.
IPR2024-01371
Ex. 1002, p. 810 of 830

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

122200 7590 03/03/2021
Carstens & Cahoon, LLP
P.O. Box 802334
Dallas, TX 75380

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

Jana Sanders via EFS filing (Typed or printed name)
/Jana Sanders/ (Signature)
March 25, 2021 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/010,573	01/29/2016	Erik Van Zijst	GEQUL00108	9731

TITLE OF INVENTION: LAYERED MULTICAST AND FAIR BANDWIDTH ALLOCATION AND PACKET PRIORITIZATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$600	$0.00	$0.00	$600	06/03/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
HONG, MICHAEL HYUN	2426	725-116000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Vincent J. Allen
2 James H. Ortega
3 Carstens & Cahoon, LLP

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Blitz Data Systems, LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Villanova, Pennsylvania, US

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

☒ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit [illegible] -2038)

[illegible] charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 50-0392

5. **Change in Entity Status** (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Vincent J. Allen/ Date March 26, 2021

Typed or printed name Vincent J. Allen Registration No. 45,514

Electronic Patent Application Fee Transmittal

Application Number:	15010573
Filing Date:	29-Jan-2016
Title of Invention:	LAYERED MULTICAST AND FAIR BANDWIDTH ALLOCATION AND PACKET PRIORITIZATION
First Named Inventor/Applicant Name:	Erik Van Zijst
Filer:	Vincent J. Allen./Jana Sanders
Attorney Docket Number:	GEQUI.00108

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	2501	1	600	600

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**600**

Electronic Acknowledgement Receipt	
EFS ID:	42291148
Application Number:	15010573
International Application Number:	
Confirmation Number:	9731
Title of Invention:	LAYERED MULTICAST AND FAIR BANDWIDTH ALLOCATION AND PACKET PRIORITIZATION
First Named Inventor/Applicant Name:	Erik Van Zijst
Customer Number:	122200
Filer:	Vincent J. Allen./Jana Sanders
Filer Authorized By:	Vincent J. Allen.
Attorney Docket Number:	GEQUI.00108
Receipt Date:	26-MAR-2021
Filing Date:	29-JAN-2016
Time Stamp:	15:13:58
Application Type:	Utility under 35 USC 111(a)

[illegible]ion:

[illegible]nt	yes
Payment Type	CARD
Payment was successfully received in RAM	$600
RAM confirmation Number	E20213PF15104722
Deposit Account	500392
Authorized User	Jana Sanders
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	GEQUI00108_IssueFee.pdf	1614299 219d9001339d2ed3b79036ab3a52f404e789c97e	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30651 1dd770e8e9c4a6c6b06a622ee402123cfc6c6b1e	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	1644950	

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/010,573	01/29/2016	Erik Van Zijst	GEQUI.00108	9731

122200 7590 04/26/2021
Carstens & Cahoon, LLP
P.O. Box 802334
Dallas, TX 75380

EXAMINER
HONG, MICHAEL HYUN

ART UNIT	PAPER NUMBER
2426	

NOTIFICATION DATE	DELIVERY MODE
04/26/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

eofficeaction@appcoll.com

PTOL-90A (Rev. 04/07)

Response to Rule 312 Communication	Application No.	Applicant(s)	
	15/010,573	Van Zijst, Erik	
	Examiner	Art Unit	AIA (FITF) Status
	MICHAEL H HONG	2426	No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☑ The amendment filed on 23 March 2021 under 37 CFR 1.312 has been considered, and has been:

a) ☑ entered.

b) ☐ entered as directed to matters of form not affecting the scope of the invention.

c) ☐ disapproved because the amendment was filed after the payment of the issue fee.
Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

d) ☐ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.

/MICHAEL H HONG/ Primary Examiner, Art Unit 2426	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:	ZIJST, Eric Van
Applicant:	Blitz Stream Video, LLC
Serial Number:	15/010,573
Filing Date:	January 29, 2016
Title:	Layered Multicast and Fair Bandwidth Allocation and Packet Prioritization
Confirmation No.:	9731
Examiner:	HONG, Michael Hyun
Art Unit:	2426
Attorney File:	GEQUI.00108

AMENDMENT AFTER NOTICE OF ALLOWANCE UNDER 37 C.F.R. 1.312

This Amendment is being filed after receipt of the Notice of Allowance and before payment of the Issue Fee under 37 C.F.R. 1.312.

SCALE VIDEO CODING, LLC v. CISCO SYSTEMS, INC. IPR2024-01371 Ex. 1002, p. 818 of 830

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/010,573	05/25/2021	11019372	GEQUI.00108	9731

122200 7590 05/05/2021

Carstens & Cahoon, LLP
P.O. Box 802334
Dallas, TX 75380

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Erik Van Zijst, Belmont, CA;
Blitz Stream Video, LLC, Plano, TX;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

IR103 (Rev. 10/09)

AO 120 (Rev. 08/10)

TO:	Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Central District of California on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
8:21-cv-01704	10/13/2021	Central District of California

PLAINTIFF	DEFENDANT
Scale Video Coding LLC,	Zoom Video Communications, Inc.,

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 11,019,372	5/25/2021	Scale Video Coding LLC
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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—entitled case, the following decision has been rendered (

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Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

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☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
8:21-cv-01699	10/13/2021	Central District of California

PLAINTIFF	DEFENDANT
Scale Video Coding LLC,	NTT Cloud Communications US Inc.,

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 11,019,372	5/25/2021	Scale Video Coding LLC
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☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
8:21-cv-01700	10/13/2021	Central District of California

PLAINTIFF	DEFENDANT
Scale Video Coding LLC,	KDDI America, Inc.,

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 11,019,372	5/25/2021	Scale Video Coding LLC
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☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
8:21-cv-01700	10/13/2021	Central District of California

PLAINTIFF	DEFENDANT
Scale Video Coding LLC,	KDDI America, Inc.,

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 11,019,372	5/25/2021	Scale Video Coding LLC
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☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
8:21-cv-01702	10/13/2021	Central District of California

PLAINTIFF	DEFENDANT
Scale Video Coding LLC,	V-Cube USA, Inc.,

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 11,019,372	5/25/2021	Scale Video Coding LLC
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☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
8:21-cv-01699	10/13/2021	Central District of California

PLAINTIFF	DEFENDANT
Scale Video Coding LLC,	NTT Cloud Communications US Inc.,

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 11,019,372	5/25/2021	Scale Video Coding LLC
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☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. CV 21-08156 JAK	DATE FILED 10/13/2021	U.S. DISTRICT COURT Central District of California
PLAINTIFF Scale Video Coding LLC,		DEFENDANT NTT Cloud Communications US Inc.,

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 11,019,372	5/25/2021	Scale Video Coding LLC
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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--entitled case, the following decision has been rendered :

"SEE COPY ATTACHED OF ORDER RE NOTICE OF VOLUNTARY DISMISSAL"

CLERK	(BY) DEPUTY CLERK	DATE
Kiry Gray	/s/ J. Lam	1/11/2022

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☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCK CV 21-08183 JAK	DATE FILED 10/13/2021	U.S. DISTRICT COURT Central District of California
PLAINTIFF Scale Video Coding LLC,		DEFENDANT Zoom Video Communications, Inc.,

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 11,019,372	5/25/2021	Scale Video Coding LLC
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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--entitled case, the following decision has been rendered :

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CLERK	(BY) DEPUTY CLERK	DATE
Kiry Gray	/s/ J. Lam	1/11/2022

Copy 3—Upon termination of action.

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

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☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCK CV 21-08330 JAK	DATE FILED 10/13/2021	U.S. DISTRICT COURT Central District of California
PLAINTIFF Scale Video Coding LLC,		DEFENDANT KDDI America, Inc.,

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 11,019,372	5/25/2021	Scale Video Coding LLC
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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--entitled case, the following decision has been rendered :

"SEE COPY ATTACHED ORDER RE NOTICE OF VOLUNTARY DISMISSAL"

CLERK	(BY) DEPUTY CLERK	DATE
Kiry Gray	/s/ J. Lam	1/12/2022

Copy 3—Upon termination of action,

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☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
2:21-cv-08331-JAK	10/13/2021	Central District of California

PLAINTIFF	DEFENDANT
Scale Video Coding LLC,	KDDI America, Inc.,

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 11,019,372	5/25/2021	Scale Video Coding LLC
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—entitled case, the following decision has been rendered (

NOTICE of Voluntary Dismissal

CLERK	(BY) DEPUTY CLERK	DATE
Kiry K Gray	Lori Muraoka	12/14/2021

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☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCK CV 21-08332 JAK	DATE FILED 10/13/2021	U.S. DISTRICT COURT Central District of California
PLAINTIFF Scale Video Coding LLC,		DEFENDANT V-Cube USA, Inc.,

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 11,019,372	5/25/2021	Scale Video Coding LLC
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"SEE COPY ATTACHED ORDER DISMISSING CASE"

CLERK	(BY) DEPUTY CLERK	DATE
Kiry Gray	/s/ J. Lam	2/10/2022

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