			CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L180	49	L179 NOT L175	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2022/05/12 10:01 AM
L181	22	L179 NOT L175	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/05/12 10:01 AM
L182	2	"20080086731"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/05/12 10:06 AM
L183	43188	virtual manage$5 virtualization	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	WITH	ON	ON	2022/05/12 10:08 AM
L184	10484	virtual physical virtualization layer	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	WITH	ON	ON	2022/05/12 10:09 AM

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			NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L185	2824	virtual physical manage$5 virtualization ADJ layer	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	WITH	ON	ON	2022/05/12 10:09 AM
L186	1632	virtual physical manage$5 virtualization ADJ layer	(US-PGPUB; USPAT; USOCR)	WITH	ON	ON	2022/05/12 10:09 AM
L187	1	L186 AND L173	(US-PGPUB; USPAT; USOCR)	WITH	ON	ON	2022/05/12 10:09 AM
L188	2	"20060149842"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/05/12 10:14 AM
L189	15	((US-20080086731-A1 OR US-20050155033-A1 OR US-20060149842-A1 OR US-20050125537-A1 OR US-20040015600-A1 OR US-20060069761-A1 OR US-20050044301-A1 OR US-20060184937-A1 OR US-20050223221-A1 OR US-20030236956-A1 OR US-20020166117-A1 OR US-20050198062-A1 OR US-20030236882-A1).did. AND PGPB.dbnm.) OR ((US-7577722-B1 OR US-6490620-B1).did. AND USPT.dbnm.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/08/30 11:44 AM
L190	45	physical resources execut$4 virtual assets	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	WITH	ON	ON	2022/08/30 11:45 AM

			EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L191	0	L189 AND L190	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	WITH	ON	ON	2022/08/30 11:46 AM
L192	23	physical resources execut$4 virtual assets	(US-PGPUB; USPAT; USOCR)	WITH	ON	ON	2022/08/30 11:46 AM
L193	640	physical resources virtual assets	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	WITH	ON	ON	2022/08/30 11:50 AM
L194	0	L193 L189	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK,	AND	ON	ON	2022/08/30 11:50 AM

			TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L195	0	L189 AND physical virtual assets	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	WITH	ON	ON	2022/08/30 11:51 AM
L196	10	L189 AND physical virtual	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	WITH	ON	ON	2022/08/30 11:51 AM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N61	10106	(manage$4 virtual$6 environment (resource$4 or asset$2) physical host allocat$4)	(USPAT)	AND	OFF	OFF	2012/04/10 02:47 PM
N62	76	((virtual adj machine) or VM) same new same physical same host	(USPAT)	AND	OFF	OFF	2012/04/10 02:47 PM
N63	206	"S13" (load adj (shar$4 or balanc$4))	(USPAT)	AND	OFF	OFF	2012/04/10 02:47 PM
N64	10106	(manage$4 virtual$6 environment (resource$4 or asset$2) physical host allocat$4)	(USPAT)	AND	OFF	OFF	2012/04/10 02:47 PM
N65	45876	"S2" "S8"	(USPAT)	AND	OFF	OFF	2012/04/10

							02:47 PM
N66	78	(manage$4 virtual$6 resource$4 physical).ab.	(USPAT)	AND	OFF	OFF	2012/04/10 02:47 PM
N67	23872	709/223,224,226,229,220,221.ccls.	(USPAT)	AND	OFF	OFF	2012/04/10 02:47 PM
N68	21589	"l3" "l4"	(USPAT)	AND	OFF	OFF	2012/04/10 02:47 PM
N69	593	(manage$4 virtual$6 environment inventory resource$4 prioritiz$4 physical host)	(USPAT)	AND	OFF	OFF	2012/04/10 02:47 PM
N70	2	("20050138165"|"20050155033"|"20060294238"|"20070067435"|"20080086731"|"7463648"|"7512769").PN.	(USPAT)	AND	OFF	OFF	2012/04/10 02:48 PM
N71	0	(manage$4 virtual$6 environment inventory resource$4 prioritiz$4 physical host).clm.	(USPAT)	AND	OFF	OFF	2012/04/10 02:48 PM
N72	593	(manage$4 virtual$6 environment inventory resource$4 prioritiz$4 physical host)	(USPAT)	AND	OFF	OFF	2012/04/10 02:48 PM
N73	497	"L26" "L18"	(USPAT)	AND	OFF	OFF	2012/04/10 02:48 PM
N74	0	N73 N72	(USPAT)	AND	OFF	OFF	2012/04/10 02:48 PM
N75	463	N69 N64	(USPAT)	AND	OFF	OFF	2012/04/10 02:49 PM
N76	0	N62 N72	(USPAT)	AND	OFF	OFF	2012/04/10 02:49 PM
N77	9	pabari.in.	(USPAT)	AND	OFF	OFF	2012/04/10 02:49 PM
N78	14	pabari.in.	(USPAT)	AND	OFF	OFF	2022/01/06 12:43 PM
N79	2	("20050138165"|"20050155033"|"20060294238"|"20070067435"|"20080086731"|"7463648"|"7512769").PN.	(USPAT)	AND	OFF	OFF	2022/01/06 12:43 PM
N80	116	N66 AND ((H04L47/70 OR H04L41/0896 OR H04L67/10 OR H04L41/0806 OR H04L67/1097 OR H04L41/12 OR H04L67/1002 OR H04L41/0893 OR H04L12/4641 OR H04L41/22 OR H04L47/822 OR	(USPAT)	AND	OFF	OFF	2022/01/06 12:44 PM

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		H04L41/5054 OR H04L67/1008 OR H04L41/0816 OR H04L41/5025 OR H04L41/5096 OR H04L43/0876 OR H04L63/08 OR H04L43/16 OR H04L47/783).cpc.)					

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
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/074,500	Filing Date 10/19/2020	☐ 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 $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $240 =	
☐ 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

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	12/09/2022	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 19	Minus	** 20	= 0		x $50 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $240 =	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

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	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
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/LINDA A WISE/
*** If the "Highest Number Previously 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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Certificate of Transmission Under 37 CFR 1.8
I hereby certify that this correspondence is being transmitted via electronic submission, attention Mail Stop: Amendment, Commissioner for Patents, Alexandria, VA 22313-1450 on:

December 9, 2022

/Thomas J. Fuller /
Thomas J. Fuller

Appl. No.	:	17/074,500	Confirmation No.	4116
Inventor	:	Vipul Pabari		
Filed	:	19 OCT 2020		
TC/A.U.	:	2472		
Examiner	:	Abdelnabi O. Musa		
Docket No.	:	367894-991102		
Customer No.	:	26379		
Title	:	VIRTUAL SYSTEMS MANAGEMENT		

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

RESPONSE TO NON-FINAL OFFICE ACTION

Commissioner:

In response to the Office Action mailed September 9, 2022, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Listing of the claims:

1. (Previously Presented) A method for access to one or more virtualization system resources over a network, the method comprising:

implementing a virtualization system that has a control computer and one or more physical resources and virtual assets connected to the control computer, wherein each of the one or more physical resources execute at least two virtual assets that each comprise software instantiations of computer systems, and the virtual assets are managed by virtualization layer instances running on each of the physical resources;

connecting an end user to the control computer; and

accessing, through the control computer connection, the virtual assets by the end user.

2. (Original) The method of claim 1, wherein connecting the end user to the control computer further comprises connecting the end user to the control computer over one of a network, a wide area network or the Internet.

3. (Previously Presented) The method of claim 2, wherein connecting the end user to the control computer further comprises using, by the end user, a desktop, a laptop or a personal digital assistant (PDA) and client resources.

4. (Original) The method of claim 3, wherein accessing the virtual assets further comprising accessing an application server by the end user.

5. (Original) The method of claim 3, wherein accessing the virtual assets further comprising using a browser.

6. (Original) The method of claim 1, wherein the virtual asset is providing end user access to one of an application server, to a middleware server and to a database.

7. (Original) The method of claim 6, wherein providing the virtual assets further comprise providing a virtual storage resource.

8. (Original) The method of claim 7, wherein providing the virtual storage resource further comprises mapping a logical storage unit to a physical storage disk.

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9. (Original) The method of claim 1, wherein providing the virtual assets further comprise providing a logical network resource.

10. (Original) The method of claim 9, wherein providing the logical network resource further comprises mapping a logical network unit to a physical network device.

11. (Previously Presented) A method, comprising:

communicating, by a user, over a network to access one or more virtual assets running in a virtualization system, wherein the virtualization system includes a control computer and one or more physical resources, wherein each of the one or more physical resources execute at least two virtual assets that each comprise software instantiations of computer systems, and wherein the virtual assets are managed by virtualization layer instances running on each of the one or more physical resources;

requesting, by the user, provisioning of a virtual asset of the one or more virtual assets in the virtualization system; and

wherein the provisioned virtual asset is a virtual storage and the virtual storage comprises one or more logical storage units mapped to one or more physical storage drives.

12. (Previously Presented) The method of claim 11 further comprising requesting, by a management application programming interface (API) of the virtualization system, the provisioning of the virtual storage.

13. (Original) The method of claim 12 further comprising configuring, over a network by the user, the virtual storage.

14. (Original) The method of claim 13 further comprising receiving, by the user, an inventory of the virtual storage.

15. (withdrawn) A method to monitor and visualize in a central dashboard across virtualization system, comprising:

collecting data about a virtualization system;

providing real time monitoring of virtual assets of the virtualization system;

performing analysis to generate key performance data for the virtualization system;

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providing usage and trend information of the virtualization system;

providing triggers, alerts and alarms for the virtualization system; and

displaying the real time monitoring, the key performance data, the usage and trend information and the triggers, alarms and alerts in a single user interface.

16. (withdrawn) The method of claim 15 further comprising identifying current bottlenecks and predicted bottlenecks of the virtualization system.

17. (withdrawn) The method of claim 15, wherein the collected data further comprises a log file.

18. (withdrawn) The method of claim 15 further comprising generating a report for the virtualization system.

19. (withdrawn) The method of claim 18, wherein the generated report is a visual report or an emailed report.

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REMARKS

Claims 1-14 are pending in this application. No new matter has been added. Reconsideration of the present application is respectfully requested.

DOUBLE PATENTING REJECTION

Claims 1-14 are rejected on the ground of nonstatutory double patenting. Applicant respectfully requests this rejection be held in abeyance until allowable matter is identified.

35 USC 103 REJECTION

Claims 1-14 are rejected under 35 USC 103 as being unpatentable by Vasilevsky (US 2005/0044301) in view of Singh (US 2006/0069761). Applicant respectfully disagrees.

Applicant respectfully submits that the cited references do not teach or suggest each limitation of independent claim 1.

For instance, claim 1 recites:

> 1. A method for access to one or more virtualization system resources over a network, the method comprising:
>
> implementing a virtualization system that has a control computer and one or more physical resources and virtual assets connected to the control computer, ***wherein each of the one or more physical resources execute at least two virtual assets that each comprise software instantiations of computer systems, and the virtual assets are managed by virtualization layer instances running on each of the physical resources***;
>
> connecting an end user to the control computer; and
>
> accessing, through the control computer connection, the virtual assets by the end user.

I. None of the cited references teach or suggest *the virtual assets are managed by virtualization layer instances running on each of the physical resources*, as recited in claim 1

First, Applicant respectfully submits that the cited references fail to teach or suggest "*the virtual assets are managed by virtualization layer instances running on each of the physical resources*," as recited in claim 1.

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Applicant respectfully disagrees with Examiner that the first reference, Vasilevsky, discloses this limitation.

Vasilevsky generally relates to a grid computing system that combines resources of multiple servers to create a ***single*** virtualized data center. Further, Vasilevsky describes a virtualization layer 104 that isolates applications on a guest operating system (GOS) operating in layers 102 and 103, respectively, from an underlying hardware layer 105. This virtualization layer 104 virtualizes resources on each individual system 107a-c system to implement a single computing system (e.g., system 101) that is independent of any individual system 107a-c.

In contrast, the present claims recite that *the virtual assets are managed by* ***virtualization layer instances running on each of the physical resources***. See Spec., para. [0064]; FIG. 3 ("The computer device **300** includes an application that provides a virtualization layer **322** that manages virtual assets **326**."). Further, claim 1 recites that *each of the one or more physical resources execute at least two virtual assets that each comprise software instantiations of computer systems.* See Spec., para. [0064]; FIG. 3 ("Thus, the computer comprises a host machine for the virtualization environment. In FIG. 3, the virtual assets are illustrated as two virtual computers, or machines, a first Virtual Machine **328** and a second Virtual Machine **330**.").

Accordingly, Vasilevsky's discussion of a single virtualization layer that virtualizes resources on each system 107a-c to implement a single computing system (e.g., system 101) clearly does not teach or suggest the *virtual assets are managed by virtualization layer instances running on each of the physical resources*, as recited in claim 1.

Singh fails to cure the deficiencies of Vasilevsky. Singh generally relates to technique[s] for load balancing among the servers of a computer network. Singh also generally describes an ability that a "server of the computer network may host one or more virtual machines." Singh, para. [0012].

However, Singh explicitly fails to teach or suggest *the virtual assets are managed by virtualization layer instances running on each of the physical resources*, as recited in claim 1. Singh at para. [0013] states "Virtualization layer **20** includes the hardware of the server, the operating system of the server, and the virtual system software that runs on the operating system of the server and supports each virtual machine of the server." In other words, Singh requires that the server runs an operating system, and that the virtual system software runs on the operating

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system. Such a disclosure cannot equate to *the virtual assets are managed by virtualization layer instances running on each of the physical resources*, as recited in claim 1 as amended.

Accordingly, Singh cannot teach or suggest the virtual assets being managed by virtualization layer instances running on each of the physical resources, as recited in claim 1.

Accordingly, none of the cited references teach or suggest *the virtual assets are managed by virtualization layer instances running on each of the physical resources*, as recited in claim 1.

II. **The combination of Singh with Vasilevsky is improper**

Applicant further submits that the combination of Singh with Vasilevsky is improper.

The U.S. Supreme Court decision in *KSR International v. Teleflex Inc.* (82 USPQ 2d 1385), modified the standard for establishing a *prima facie* case of obviousness. Under the *KSR* rule, three basic criteria are considered. First, some suggestion or motivation to modify a reference or to combine the teachings of multiple references still has to be shown. Second, the combination has to suggest a reasonable expectation of success. Third, the prior art reference or combination has to teach or suggest all of the recited claim limitations. Factors such as the general state of the art and common sense may be considered when determining the feasibility of modifying and/or combining references.

The *2010 KSR Guidelines Update* establishing standards for obviousness emphasize that Examiners "must provide a reasoned explanation as to why the invention as claimed would have been obvious," and are equally clear that "familiar lines of argument," *e.g.,* a showing of unexpected results, a lack of reasonable expectation of success, and a teaching away from the claimed invention by the prior art, can still demonstrate the non-obviousness of a claimed invention. Federal Register, Vol. 75, No. 169, September 1, 2010, page 53645. Applicants respectfully submit that the Office has not met the burden of establishing a *prima facie* case of obviousness for the reasons discussed below.

Applicant submits that the proposed modification of Singh to the teachings of Vasilevsky render the prior art unsatisfactory for its intended purpose. MPEP 2143.01(V) states that "T**he proposed modification cannot render the prior art unsatisfactory for its intended purpose."** Further**,** If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *See In re Gordon,* 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

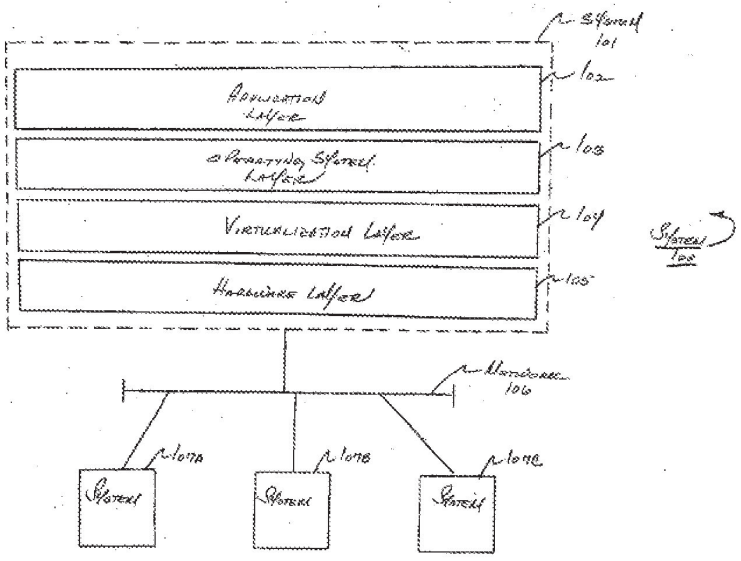
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Vasilevsky describes a grid computing system in which multiple computers are virtualized to generate a single virtualized computing system. Further, at para. [0057] of Vasilevsky:

> From the perspective of the application, the virtual server operates like a shared memory multi-processor, wherein the same portion of the application is located on one or more of the virtual processors, and the multiple portions operate in parallel. The resulting system allows applications and operating systems to execute on virtual servers, where each of these virtual servers span a collection of physical servers (or nodes) transparent to the applications and operating systems. **That is, the virtual server presents, to the operating system and application a single system where single instance of an operating system runs. Such a system according to one embodiment is contrasted by conventional clustered computing systems that support single system image as typically understood in the art, in that multiple instances of an operating system are clustered to create an illusion of a single system to the application programmers**.

In other words, Vasilevsky sets out to abstract a grid of multiple computers to generate a single virtualized system that can execute applications and operating systems across resources of the multiple computers that creates an illusion of a single system.

FIG. 1 of Vasilevsky is reproduced for reference below:



The other cited reference, Singh, sets out to accomplish an entirely different purpose. Singh relates to load balancing of processing tasks across multiple computers in a computer network. Particularly, in para. [0012] of Singh:

> **The system and method disclosed herein provides a technique for load balancing among the servers of a computer network**. Each server of the computer network may host one or more virtual machines. **When the resource utilization of any physical machine of the computer network exceeds a predetermined threshold, a virtual machine of the server node is selected for migration to another server of the computer network.** The system and method disclosed herein concerns the intelligent selection of a virtual machine of an overutilized server for transfer to another server of the computer network.

In other words, Singh sets out to perform load balancing by migrating processing tasks across computers (or a virtual machine executing on each computer) to improve network performance. Further, each individual server (e.g., 16A-C) in Singh is described as each comprising one or more virtual machines. Singh, para. [0013]; FIG. 1.

FIG. 1 of Singh is reproduced for reference below:

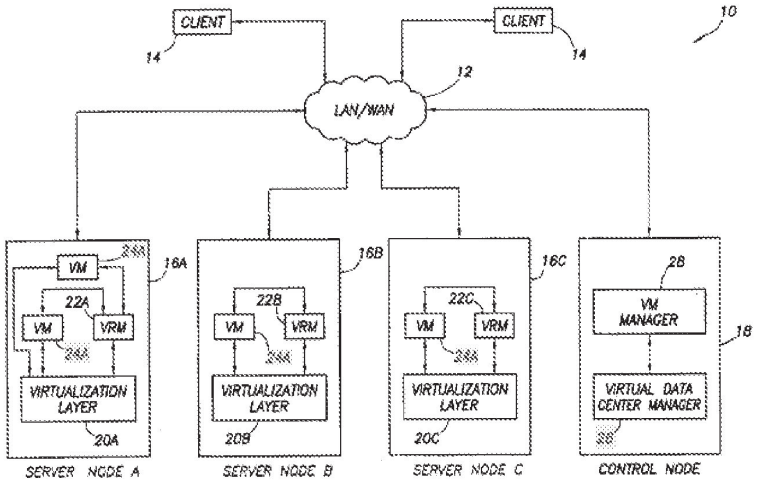


FIG. 1

As described above, Vasilevsky virtualizes a grid of multiple computers to generate a **single virtualized system** that creates an illusion of a single system. The Examiner allegedly proposes modifying Vasilevsky to incorporate the server (e.g., 16A in FIG. 1 of Singh) supporting multiple virtual machine instances (24A in FIG. 1 of Singh) as described in Singh.

Further, the Examiner provides the following motivation to combine these references:

> Therefore, it would have been obvious to one of ordinary skilled [sic] in the art before the effective filing date of the claimed invention to have modified [sic] Vasilevsky by the teaching of Singh to have the physical resources execute at least two virtual assets that each contains [sic] software instantiations of computer system in order to supports [sic] the virtual machines running on the server.

Office Action, p. 8.

However, such a motivation to combine references is conclusory and would render Vasilevsky inoperable for its intended purpose. For instance, the Examiner proposes modifying each computer (e.g., system 107a-c) in Vasilevsky to each include multiple virtual machines (e.g., 24 a) as described in Singh. The proposed modified computer (e.g., system 107a-c) in Vasilevsky would require the partitioning of computing resources **on each individual computer**. See Singh, paras. [0013]-[0014]. In such a modified computer, the resources on each computer would be partitioned to the virtual machines implemented in each computer (e.g., system 107a-c).

Such a modification would render the teachings of Vasilevsky inoperable for its intended purpose. The stated purpose of Vasilevsky is to "virtualize" a grid of computers to generate a **single virtualized system** incorporating the combined resources of the grid of computers. However, the proposed modification requires server-level partitioning of resources on each server in Vasilevsky, as specified in Singh. Such partitioning would prevent the abstraction of each computer (e.g., system 107a-c) in Vasilevsky to generate a single virtualized system using the combined resources of each computer in the system.

Accordingly, incorporating the teachings in Singh to modify each computer of Vasilevsky as proposed by the Office would explicitly obviate the operative purpose of Vasilevsky: abstracting of a grid of multiple computers to generate a **single virtualized system** that can execute applications and operating systems across resources of the multiple computers **that creates an illusion of a single system**.

Therefore, Applicant submits that the proposed modification of Singh to the teachings of Vasilevsky render the prior art unsatisfactory for its intended purpose.

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Accordingly, for at least these reasons, any combination of Vasilevsky and Singh fail to teach or suggest each limitation of claim 1.

Further, Vasilevsky does not teach or suggest the limitations of independent claim 11 for at least reasons similar to that provided with respect to claim 1. Additionally, dependent claims 2-10, and 12-14 are dependent on claims 1 and 11, and therefore are allowable at least due to their dependence to independent claims 1 and 11. Withdrawal of the present rejection is respectfully requested.

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CONCLUSION

The Examiner is invited to call Applicant's attorney at the number below in order to speed the prosecution of this application.

The Commissioner is authorized to charge any deficiencies in fees and credit any overpayment of fees to Deposit Account **No. 07-1896**.

Respectfully submitted,

DLA PIPER LLP (US)

Dated: December 9, 2022

By: /Thomas J. Fuller /
Thomas J. Fuller
Reg. No. 74,439
Attorney for Applicant

Thomas J. Fuller
DLA Piper LLP (US)
2000 University Avenue
East Palo Alto, CA 94303-2248
650-833-2000 (Main)
650-833-2001 (Facsimile)

Patent Owner, ToutVirtual - Ex. 2022, p. 58

Electronic Acknowledgement Receipt	
EFS ID:	47181698
Application Number:	17074500
International Application Number:	
Confirmation Number:	4116
Title of Invention:	VIRTUAL SYSTEMS MANAGEMENT
First Named Inventor/Applicant Name:	Vipul Pabari
Customer Number:	26379
Filer:	Thomas James Fuller/Nicole Brown
Filer Authorized By:	Thomas James Fuller
Attorney Docket Number:	367894-991102
Receipt Date:	09-DEC-2022
Filing Date:	19-OCT-2020
Time Stamp:	21:22:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		367894_991102_Response_NFOA.pdf	297665 a0e245ec70d26d38cd86127db4c27a674cf96468	yes	12

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Request for Reconsideration-After Non-Final Rejection	1	1
	Claims	2	4
	Applicant Arguments/Remarks Made in an Amendment	5	12
Warnings:			
Information:			
	Total Files Size (in bytes):	297665	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

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.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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NOTICE OF ALLOWANCE AND FEE(S) DUE

26379 7590 01/23/2023

DLA PIPER LLP (US)
2000 UNIVERSITY AVENUE
EAST PALO ALTO, CA 94303-2248

EXAMINER
MUSA, ABDELNABI O

ART UNIT	PAPER NUMBER
2472	

DATE MAILED: 01/23/2023

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/074,500	10/19/2020	Vipul Pabari	367894-991102	4116

TITLE OF INVENTION: VIRTUAL SYSTEMS MANAGEMENT

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	04/24/2023

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 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted 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. 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.

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)

26379 7590 01/23/2023
DLA PIPER LLP (US)
2000 UNIVERSITY AVENUE
EAST PALO ALTO, CA 94303-2248

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.
17/074,500	10/19/2020	Vipul Pabari	367894-991102	4116

TITLE OF INVENTION: VIRTUAL SYSTEMS MANAGEMENT

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	04/24/2023

EXAMINER	ART UNIT	CLASS-SUBCLASS
MUSA, ABDELNABI O	2472	709-226000

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/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 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)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account 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. _____

Patent Owner, ToutVirtual - Ex. 2022, p. 62

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/074,500	10/19/2020	Vipul Pabari	367894-991102	4116

26379 7590 01/23/2023

DLA PIPER LLP (US)
2000 UNIVERSITY AVENUE
EAST PALO ALTO, CA 94303-2248

EXAMINER	
MUSA, ABDELNABI O	
ART UNIT	**PAPER NUMBER**
2472	

DATE MAILED: 01/23/2023

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.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security 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.** 17/074,500	**Applicant(s)** Pabari, Vipul	
	Examiner ABDELNABI O MUSA	**Art Unit** 2472	**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 the amendment filed on 12/09/2022.
   ☐ 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 1-14 . 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 of Biological Material _____.
4. ☑ Interview Summary (PTO-413), Paper No./Mail Date. 01/09/2022.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/ABDELNABI O MUSA/
Primary Examiner, Art Unit 2472

Notice of Pre-AIA or AIA Status

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

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance:

There is no teaching or suggestion in the prior art of the claimed limitations, as presented in the independent claims, specifically employing a virtualization system that has a control computer and one or more physical resources and virtual assets connected to the control computer, each of the one or more physical resources execute at least two virtual assets that each comprise software instantiations of computer systems, and the virtual assets are managed by virtualization layer instances running on each of the physical resources, connecting an end user to the control computer and accessing the virtual assets by the end user through the control computer connection as detailed in the dependent claims for such limitations.

The closest prior art found by the Examiner is the previously cited references namely, (US 2005/0044301 A1), (US 2006/0149842 A1) and (US 2006/0069761 A1).

However, the references alone and in combination do not teach or suggest a virtual system management the way as claimed in the present application.

For these reasons, in conjunction with the other claim limitations puts this case in condition for allowance.

3. 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 submission should be clearly labeled "Comments on Statement of Reason for Allowance."

Correspondence Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABDELNABI O MUSA whose telephone number is (571)270-1901, and email address is abdelnabi.musa@uspto.gov 'preferred'. The examiner can normally be reached on M-F 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kizou, Hassan, can be reached on 571-2723088. 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.

/ABDELNABI O MUSA/
Primary Examiner, Art Unit 2472

Examiner-Initiated Interview Summary	Application No. 17/074,500	Applicant(s) Pabari, Vipul		
	Examiner ABDELNABI O MUSA	Art Unit 2472	AIA (First Inventor to File) Status No	Page 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	Title	Type
ABDELNABI O MUSA	Primary Examiner	Telephonic
Thomas J. Fuller	Attorney of Record	

Date of Interview: 09 January 2023

Issues Discussed:

Non-statutory Double Patenting

Submitting an eTD for a double patenting rejection. An agreement was reached.

/ABDELNABI O MUSA/ Primary Examiner, Art Unit 2472	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/074,500	Pabari, Vipul
	Examiner	Art Unit
	ABDELNABI O MUSA	2472

CPC - Searched*		
Symbol	**Date**	**Examiner**
H04L 41/00, 41/147, 47/78, 41/064, 41/12, 41/18, 41/22, 43/08	01/06/2022	AM
H04L 41/00, 41/147, 47/78, 41/064, 41/12	05/12/2022	AM
H04L 41/00, 41/147, 47/78, 41/064, 41/12	08/30/2022	AM
H04L 41/00, 41/147, 47/78, 41/064, 41/12	01/12/2023	AM

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.

/ABDELNABI O MUSA/ Primary Examiner, Art Unit 2472	

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/074,500	Pabari, Vipul
	Examiner	Art Unit
	ABDELNABI O MUSA	2472

Search Notes		
Search Notes	**Date**	**Examiner**
H04L 41/00, 41/147, 47/78, 41/064, 41/12, 41/18, 41/22, 43/08 search is limited by text, see attached search history report.	01/06/2022	AM
PE2E SEARCH (USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB), see attached; NPL: IEEE; Inventor Search/DP	01/06/2022	AM
H04L 41/00, 41/147, 47/78, 41/064, 41/12, 41/18, 41/22, 43/08 search is limited by text, see attached search history report.	05/12/2022	AM
PE2E SEARCH (USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB), see attached; NPL: IEEE; Inventor Search/DP	05/12/2022	AM
PE2E SEARCH (USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB), see attached; NPL: IEEE; Inventor Search/DP	08/30/2022	AM
H04L 41/00, 41/147, 47/78, 41/064 search is limited by text, see attached search history report.	08/30/2022	AM
PE2E SEARCH (USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB), see attached; NPL: IEEE; Inventor Search/DP	01/12/2023	AM
H04L 41/00, 41/147, 47/78, 41/064 search is limited by text, see attached search history report.	01/12/2023	AM

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
H04L	41/00, 41/147, 47/78, 41/064, 41/12	01/12/2023	AM
	PE2E SEARCH US-PGPUB, USPAT, UPAD searched.	01/12/2023	AM

/ABDELNABI O MUSA/ Primary Examiner, Art Unit 2472	

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Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/074,500	Pabari, Vipul
	Examiner	**Art Unit**
	ABDELNABI O MUSA	2472

CPC						
Symbol					**Type**	**Version**
G06F	/	9	/	5077	F	2013-01-01
G06F	/	9	/	5072	I	2013-01-01
H04L	/	41	/	00	I	2013-01-01
H04L	/	41	/	0806	I	2013-01-01
H04L	/	41	/	0823	I	2013-01-01
H04L	/	41	/	0886	I	2013-01-01
H04L	/	41	/	147	I	2013-01-01
H04L	/	67	/	1008	I	2013-01-01
H04L	/	67	/	1029	I	2013-01-01
H04L	/	67	/	1017	I	2013-01-01
G06F	/	9	/	455	I	2013-01-01
G06F	/	9	/	50	I	2013-01-01
H04L	/	47	/	78	I	2013-01-01
G06F	/	9	/	45558	I	2013-01-01
H04L	/	41	/	046	A	2013-01-01
H04L	/	41	/	0816	A	2013-01-01
H04L	/	41	/	0896	A	2013-01-01
H04L	/	41	/	12	A	2013-01-01
H04L	/	41	/	18	A	2013-01-01
H04L	/	41	/	22	A	2013-01-01
H04L	/	41	/	5025	A	2013-01-01
H04L	/	43	/	08	A	2013-01-01
H04L	/	67	/	1034	A	2013-01-01
H04L	/	67	/	1001	A	2022-05-01
G06F	/	2009	/	45595	A	2013-01-01

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	14	
/ABDELNABI O MUSA/ Primary Examiner, Art Unit 2472	12 January 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office — Part of Paper No.: 20230111

Patent Owner, ToutVirtual - Ex. 2022, p. 72

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/074,500	Pabari, Vipul
	Examiner	**Art Unit**
	ABDELNABI O MUSA	2472

INTERNATIONAL CLASSIFICATION				
CLAIMED				
H04L	/	41	/	5054

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
709	226

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	14	
/ABDELNABI O MUSA/ Primary Examiner, Art Unit 2472	12 January 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office — Part of Paper No.: 20230111

Patent Owner, ToutVirtual - Ex. 2022, p. 73

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/074,500	Pabari, Vipul
	Examiner	**Art Unit**
	ABDELNABI O MUSA	2472

☑ 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	10	10		19										
2	2	11	11												
3	3	12	12												
4	4	13	13												
5	5	14	14												
6	6		15												
7	7		16												
8	8		17												
9	9		18												

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	14	
/ABDELNABI O MUSA/ Primary Examiner, Art Unit 2472	12 January 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office

Part of Paper No.: 20230111

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/074,500	Pabari, Vipul
	Examiner	**Art Unit**
	ABDELNABI O MUSA	2472

✓	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	10/29/2021	01/06/2022	05/12/2022	08/30/2022	01/12/2023				
1	1	÷	✓	✓	✓	=				
2	2	÷	✓	✓	✓	=				
3	3	÷	✓	✓	✓	=				
4	4	÷	✓	✓	✓	=				
5	5	÷	✓	✓	✓	=				
6	6	÷	✓	✓	✓	=				
7	7	÷	✓	✓	✓	=				
8	8	÷	✓	✓	✓	=				
9	9	÷	✓	✓	✓	=				
10	10	÷	✓	✓	✓	=				
11	11	÷	✓	✓	✓	=				
12	12	÷	✓	✓	✓	=				
13	13	÷	✓	✓	✓	=				
14	14	÷	✓	✓	✓	=				
	15	÷	N	N	N					
	16	÷	N	N	N					
	17	÷	N	N	N					
	18	÷	N	N	N					
	19	÷	N	N	N					

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