507934017 05/31/2023

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7981145

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
OFER NAAMAN	12/08/2021
OSNAT KATZ	05/09/2023
NIR BAR-OR	12/08/2021
ADI HABUSHA	12/08/2021

RECEIVING PARTY DATA

Name:	AMAZON TECHNOLOGIES, INC.
Street Address:	PO BOX 81226
City:	SEATTLE
State/Country:	WASHINGTON
Postal Code:	98108-1226

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17548190

CORRESPONDENCE DATA

Fax Number: (503)595-5301

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 5035955300

Email: valerie.sullivan@klarquist.com

Correspondent Name: ROBERT SCOTTI/KLARQUIST SPARKMAN, LLP

Address Line 1: 121 SW SALMON ST., SUITE 1600 Address Line 2: ONE WORLD TRADE CENTER Address Line 4: PORTLAND, OREGON 97204

ATTORNEY DOCKET NUMBER:	8904-107278-01
NAME OF SUBMITTER:	ROBERT F. SCOTTI
SIGNATURE:	/Robert F. Scotti/
DATE SIGNED:	05/31/2023

Total Attachments: 11

source=107278-01 Assignment#page1.tif source=107278-01_Assignment#page2.tif



U.S. Patent Appln. No.17/548,190 Filing Date <u>12/10/2021</u>

Attorney Docket No. 8904-107278-01 Client Docket No. P76301-US01

PARTIES TO THE ASSIGNMENT

Assignor(s):

Ofer Naaman 410 Terry Avenue North Seattle, WA 98109-5210

Osnat Katz 410 Terry Avenue North Seattle, WA 98109-5210

Nir Bar-Or 410 Terry Avenue North Seattle, WA 98109-5210

Adi Habusha 410 Terry Avenue North Seattle, WA 98109-5210

Assignee:

Amazon Technologies, Inc. PO Box 81226 Seattle, WA 98108-1226

<u>AGREEMENT</u>

WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled "INCREASING OF CACHE RELIABILITY LIFETIME THROUGH DYNAMIC INVALIDATION AND DEACTIVATION OF PROBLEMATIC CACHE LINES" (Invention) for which a non-provisional application for United States Letters Patent (Application): was filed on ______ and accorded U.S. Application No. _____ ; or will be filed concurrently with the submission of this executed PATENT ASSIGNMENT for recordation. ASSIGNOR(S) hereby authorizes and requests ASSIGNEE'S legal

representatives, of Klarquist Sparkman, LLP, associated with Customer No. 126752,

Page 1 of 7

U.S. Patent Appln. No. <u>17/548,190</u>

Filing Date 12/10/2021

Attorney Docket No. 8904-107278-01

Client Docket No. P76301-US01

Title of Invention: INCREASING OF CACHE RELIABILITY LIFETIME THROUGH DYNAMIC

INVALIDATION AND DEACTIVATION OF PROBLEMATIC CACHE LINES

to insert in the header above and here in parentheses (U.S. Patent Application No.

17/548.190, filed12/10/2021) this application's U.S. application number and filing

date, when known.

WHEREAS, ASSIGNEE, a corporation of the State of Nevada, is desirous of acquiring the

entire right, title and interest in and to the Invention and in and to any letters patent that may be

granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of which

is hereby acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto ASSIGNEE its

successors and assigns, the entire right, title and interest in and to said Invention and any

improvements thereto, said Application and any and all letters patent which may be granted for

said Invention in the United States of America and its territorial possessions and in any and all

foreign countries, and in any and all provisional, divisions, reissues, re-examinations and

continuations thereof, including the right to file foreign applications directly in the name of

ASSIGNEE and to claim priority rights deriving from said Application to which said foreign

applications are entitled by virtue of international convention, treaty or otherwise, said Invention,

Application and all letters patent on said Invention to be held and enjoyed by ASSIGNEE and its

successors and assigns for their use and benefit and of their successors and assigns as fully and

entirely as the same would have been held and enjoyed by ASSIGNOR(S) had this assignment,

transfer and sale not been made. ASSIGNOR(S) hereby authorize and request the Commissioner

of Patents and Trademarks, as well as all other applicable patent offices throughout the world, to

issue all letters patent on said Invention to ASSIGNEE. ASSIGNOR(S) agree to execute all

instruments and documents required for the making and prosecution of applications for United

Page 2 of 7

U.S. Patent Appln. No. 17/548, 190

Filing Date 12/10/2021

Attorney Docket No. 8904-107278-01

Client Docket No. P76301-US01

Title of Invention: INCREASING OF CACHE RELIABILITY LIFETIME THROUGH DYNAMIC

INVALIDATION AND DEACTIVATION OF PROBLEMATIC CACHE LINES

States and foreign letters patent on said invention, for litigation regarding said letters patent, or

for the purpose of protecting title to said invention or letters patent therefor.

AND ASSIGNOR(S) DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its

successors, legal representatives, and assigns all claims for damages and all remedies arising out

of any violation of the rights assigned hereby that may have accrued prior to the date of

assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue

for, collect, and retain damages for past infringements of said letters patent before or after

issuance.

AND ASSIGNOR(S) DOES HEREBY covenant and agree that ASSIGNOR(S) will communicate

to ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR

respecting the Invention or said Application, and testify in any legal proceeding, assist in the

preparation of any other patent property relating to the Application and the Invention or any

improvements made thereto, sign/execute all lawful papers, provide all requested documents,

execute and make all rightful oaths and/or declarations in connection with the Application and

the Invention including any improvements made thereto, any patent applications filed therefrom,

and any continuing application filed from any of the aforementioned applications, and generally

do everything possible to aid ASSIGNEE, its successors, legal representatives and assigns, to obtain

and enforce proper patent protection for the Invention in all countries. These provisions are

binding upon ASSIGNOR's heirs, legal representatives, administrators, and assigns.

Page 3 of 7

PATENT

REEL: 063808 FRAME: 0649

U.S. Patent Appln. No. <u>17/548,190</u> Filing Date<u>12/10/2021</u>

Attorney Docket No. 8904-107278-01 Client Docket No. P76301-US01

Title of Invention: INCREASING OF CACHE RELIABILITY LIFETIME THROUGH DYNAMIC INVALIDATION AND DEACTIVATION OF PROBLEMATIC CACHE LINES

DECLAF Δs a be	RATION low named inventor, I hereby dec	lare that:		
	claration is directed to:	idi C silde.		
11113 00	the attached application; or			
			C11	
	United States Patent Applicat			
	PCT International Application	number	_ filed on	*
The abo	ove-identified application was mad	de or authorized to b	e made by me.	
I believ	e that I am the original inventor o	r an original joint inv	entor of a claimed li	nvention in the
applicat	tion.			
I have r	eviewed and understand the cont	ents of the above-id	entified application,	and
acknow	rledge the duty to disclose to the I	JS Patent & Tradema	ark Office all informa	ation known to
me to b	e material to the patentability as	defined in 37 CFR 1.	56.	
I hereb	y acknowledge that any willful fals	se statement made ir	n this declaration is :	ounishable
	.8 USC 1001 by fine or imprisonme		·	
	DocuSigned by:			
	96. Vaaman/ BC9CACD514D24E4			
Ofer Na	aman			
Decem	ber 8, 2021			
Date				

Page 4 of 7

U.S. Patent Appln. No. <u>17/548,190</u> Filing Date<u>12/10/2021</u>

Attorney Docket No. 8904-107278-01 Client Docket No. P76301-US01

Title of Invention: INCREASING OF CACHE RELIABILITY LIFETIME THROUGH DYNAMIC INVALIDATION AND DEACTIVATION OF PROBLEMATIC CACHE LINES

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u>ika non</u> elow named inventor, I hereby decla	are that:		
This d	eclaration is directed to:			
	igotimes the attached application; or			
	United States Patent Applicati	ion number	filed on	; or
	PCT International Application	number	filed on	············
The al	pove-identified application was mad	e or authorized	to be made by me.	
I belie	ve that I am the original inventor or ation.	an original join	tinventor of a claimed I	nvention in the
I have	reviewed and understand the conte	ents of the abov	e-identified application	, and acknowledge
the du	ity to disclose to the US Patent & Tra	ademark Office	all information known t	o me to be
mater	ial to the patentability as defined in	37 CFR 1.56.		
I here	oy acknowledge that any willful false	e statement ma	de in this declaration is	punishable under
18 US	C 1001 by fine or imprisonment of n	ot more than fi	ve (5) years, or both.	
Osnat	Katz			
Date				

U.S. Patent Appln. No. <u>17/548,190</u> Filing Date<u>12/10/2021</u>

Attorney Docket No. 8904-107278-01 Client Docket No. P76301-US01

Title of Invention: INCREASING OF CACHE RELIABILITY LIFETIME THROUGH DYNAMIC INVALIDATION AND DEACTIVATION OF PROBLEMATIC CACHE LINES

	RATION Flow named inventor, I hereby decla	re that:		
This de	claration is directed to:			
	★ the attached application; or a continuous co			
	United States Patent Application	on number	filed on	; or
	PCT International Application	number	filed on	·
The ab	ove-identified application was made	e or authorized to b	e made by me.	
I believ	e that I am the original inventor or	an original joint inve	entor of a claimed Ir	vention in the
applica	tion.			
I have	reviewed and understand the conte	nts of the above-ide	entified application,	and acknowledge
the du	ty to disclose to the US Patent & Tra	demark Office all in	formation known to	me to be
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I hereb	y acknowledge that any willful false	statement made in	this declaration is p	ounishable under
18 USC	1001 by fine or imprisonment of no	ot more than five (5) years, or both.	
Nir Bar	~DocuSigned by: <u>Mr. Bar — Dr/</u> ~C9D8C34B32994C1Or			
Decem	ber 8, 2021			
Date				

U.S. Patent Appln. No. <u>17/548,190</u> Filing Date<u>12/10/2021</u>

Attorney Docket No. 8904-107278-01 Client Docket No. P76301-US01

Title of Invention: INCREASING OF CACHE RELIABILITY LIFETIME THROUGH DYNAMIC INVALIDATION AND DEACTIVATION OF PROBLEMATIC CACHE LINES

<u>DECLARATION</u> As a below named inventor, I hereby dec	lare that:		
This declaration is directed to:			
the attached application; or			
United States Patent Applica	tion number	filed on	·or
PCT International Application			
Instruction 1 1 1			
The above-identified application was ma	de or authorized	to be made by me.	
I believe that I am the original inventor o	r an original joint	inventor of a claimed l	nvention in the
application.			
I have reviewed and understand the conf	tents of the abov	e-identified application	, and acknowledge
the duty to disclose to the US Patent & T	rademark Office	all information known t	o me to be
material to the patentability as defined in	n 37 CFR 1.56.		
I hereby acknowledge that any willful fals	se statement ma	de in this declaration is	punishable under
18 USC 1001 by fine or imprisonment of	not more than fiv	ve (5) years, or both.	
Docusigned by: // Li Habusha/	_		
December 8, 2021	2004		
Date			

U.S. Patent Appln. No. 17/548,190 Filing Date 10 Dec 2021

Attorney Docket No. 8904-107278-01 Client Docket No. P76301-US01

PARTIES TO THE ASSIGNMENT

Assignor(s):

Ofer Naaman 410 Terry Avenue North Seattle, WA 98109-5210

Osnat Katz 410 Terry Avenue North Seattle, WA 98109-5210

Nir Bar-Or 410 Terry Avenue North Seattle, WA 98109-5210

Adi Habusha 410 Terry Avenue North Seattle, WA 98109-5210

Assignee:

Amazon Technologies, Inc. PO Box 81226 Seattle, WA 98108-1226

<u>AGREEMENT</u>

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\boxtimes	was filed on 10 Dec 2021 and accorded U.S. Application No. 17/548,190; or
	will be filed concurrently with the submission of this executed PATENT ASSIGNMENT
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Page 1 of 4

U.S. Patent Appln. No. 17/548,190

Filing Date 10 Dec 2021

Attorney Docket No. 8904-107278-01

Client Docket No. P76301-US01

Title of Invention: INCREASING OF CACHE RELIABILITY LIFETIME THROUGH DYNAMIC

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be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of

which is hereby acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto ASSIGNEE its

successors and assigns, the entire right, title and interest in and to said Invention and any

improvements thereto, said Application and any and all letters patent which may be granted for

said Invention in the United States of America and its territorial possessions and in any and all

foreign countries, and in any and all provisional, divisions, reissues, re-examinations and

continuations thereof, including the right to file foreign applications directly in the name of

ASSIGNEE and to claim priority rights deriving from said Application to which said foreign

applications are entitled by virtue of international convention, treaty or otherwise, said

Invention, Application and all letters patent on said Invention to be held and enjoyed by

ASSIGNEE and its successors and assigns for their use and benefit and of their successors and

assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNOR(S) had

this assignment, transfer and sale not been made. ASSIGNOR(S) hereby authorize and request

the Commissioner of Patents and Trademarks, as well as all other applicable patent offices

throughout the world, to issue all letters patent on said Invention to ASSIGNEE. ASSIGNOR(S)

agree to execute all instruments and documents required for the making and prosecution of

Page 2 of 4

U.S. Patent Appln. No. 17/548,190

Filing Date 10 Dec 2021

Attorney Docket No. 8904-107278-01

Client Docket No. P76301-US01

Title of Invention: INCREASING OF CACHE RELIABILITY LIFETIME THROUGH DYNAMIC

INVALIDATION AND DEACTIVATION OF PROBLEMATIC CACHE LINES

applications for United States and foreign letters patent on said Invention, for litigation

regarding said letters patent, or for the purpose of protecting title to said Invention or letters

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communicate to ASSIGNEE, its successors, legal representatives and assigns, any facts known to

ASSIGNOR respecting the Invention or said Application, and testify in any legal proceeding, assist

in the preparation of any other patent property relating to the Application and the Invention or

any improvements made thereto, sign/execute all lawful papers, provide all requested

documents, execute and make all rightful oaths and/or declarations in connection with the

Application and the Invention including any improvements made thereto, any patent

applications filed therefrom, and any continuing application filed from any of the

aforementioned applications, and generally do everything possible to aid ASSIGNEE, its

successors, legal representatives and assigns, to obtain and enforce proper patent protection for

the Invention in all countries. These provisions are binding upon ASSIGNOR's heirs, legal

representatives, administrators, and assigns.

Page 3 of 4

PATENT

REEL: 063808 FRAME: 0656

Date

RECORDED: 05/31/2023

PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)

U.S. Patent Appln. No. 17/548,190 Filing Date 10 Dec 2021

Attorney Docket No. 8904-107278-01 Client Docket No. P76301-US01

Title of Invention: INCREASING OF CACHE RELIABILITY LIFETIME THROUGH DYNAMIC INVALIDATION AND DEACTIVATION OF PROBLEMATIC CACHE LINES

DECLARATION As a below named inventor, I hereby declare that: This declaration is directed to: the attached application; or United States Patent Application number 17/548,190 filed on 10 Dec 2021; or PCT International Application number ______ filed on _____. The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed Invention in the application. I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both. DocuSigned by: Osnat Katz --- CBAB538D871A45C... Osnat Katz May 9, 2023

Page 4 of 4