505027965 07/31/2018

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5074715

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

## **CONVEYING PARTY DATA**

Name	Execution Date
DEEPTI S. PRAKASH	07/11/2018
LUCIA E. BALLARD	07/10/2018
JERROLD V. HAUCK	07/10/2018
FENG TANG	07/10/2018
ETAI LITTWIN	07/12/2018
PAVAN KUMAR ANSOSALU VASU	07/12/2018
GIDEON LITTWIN	07/12/2018
THORSTEN GERNOTH	07/18/2018
LUCIE KUCEROVA	07/12/2018
PETR KOSTKA	07/13/2018
EITAN HIRSH	07/12/2018
TAL KAITZ	07/12/2018
JONATHAN POKRASS	07/12/2018
ANDREI KOLIN	07/12/2018
MOSHE LAIFENFELD	07/12/2018
MATTHEW C. WALDON	07/12/2018
THOMAS P. MENSCH	07/10/2018
MICHAEL R. MALONE	07/12/2018
ZIV HENDEL	07/12/2018
ANUP K. SHARMA	07/11/2018

# **RECEIVING PARTY DATA**

Name:	APPLE INC.
Street Address:	ONE APPLE PARK WAY
City:	CUPERTINO
State/Country:	CALIFORNIA
Postal Code:	95014

# **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16049933

#### CORRESPONDENCE DATA

Fax Number: (512)853-8801

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: 512 853 8800

Email: dbeasley@intprop.com

**Correspondent Name:** MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.

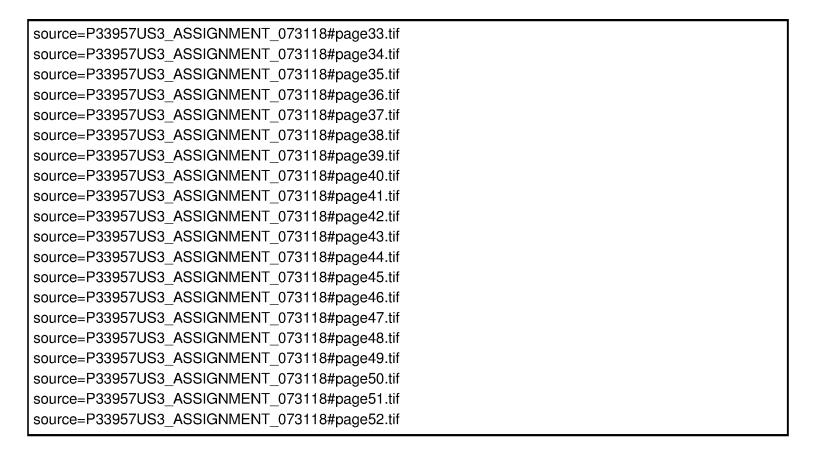
Address Line 1: P.O. BOX 398

Address Line 4: AUSTIN, TEXAS 78767-0398

ATTORNEY DOCKET NUMBER:	1888-10606
NAME OF SUBMITTER:	MICHAEL B. DAVIS
SIGNATURE:	/Michael B. Davis/
DATE SIGNED:	07/31/2018

#### **Total Attachments: 52**

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(Signature)	Dest	Date: 07/11/2018
Name:	Deepti S. Prakash	
(Signature) _ Name:	Lucia E. Ballard	Date:
(Signature) _ Name:	Jerrold V. Hauck	Date:
(Signature) _ Name:	Feng Tang	Date:
(Signature) _ Name:	Etai Littwin	Date:
(Signature) _ Name:	Payan Kumar Anasosalu Vasu	Date:
(Signature) _ Name:	Gideon Littwin	Date:
(Signature) Name:	Thorsten Gernoth	Date:
Signature)	Lucie Kucerwa	Date:

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(Signature)_		Dates
Name:	Petr Kostka	
(Signature) _	Steven P. Hotelling	Date:
Name:	Steven P. Hotelling	
(Signature)_	Eitan Hírsh	Date:
Name:	Eitan Hirsh	
(Signature)_	Tal Kaitz	Date:
Name:	Tal Kaitz	
(Signature)_	Jonathan Pokrass	Date:
Name:	Jonathan Pokrass	
(Signature)		Datëv
Name:	Andrei Kolin	
(Signature)	Moshe Laifenfeld	Date:
Name:	Moshe Laifenfeld	
(Signature)		Date:
Name:	Matthew C. Waldon	
(Signature)		Date:
Name:	Thomas P. Mensch	***************************************

(Signature)		Date:
Name:	Lynn R. Youngs	
(Signature)		Date:
Name:	Christopher G. Zeleznik	
(Signature)		Date:
Name:	Michael R. Malone	
(Signature)		Date:
Name:	Ziv Hendel	
(Signature)	Ivan Krstic	Date:
Name:	Ivan Krstic	
(Signature)		Date:
Name:	Anup K. Sharma	

Customer No. 81310
Dean M. Munyon
Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C.
P.O. Box 398
Austin, TX 78767-0398

4

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(Signature) _ Name:	Jerrold V. Hauck	Date:
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(Signature) Name:	Pavan Kumar Anasosalu Vasu	Date:
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(Signature)	Lucie Kucerova	Date:

(Signature)_	Petr Kostka	Date:
Name:	Petr Kostka	
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(Signature)		Date:
Name:	Lynn R. Youngs	
(Signature)	Christopher G. Zeleznik	Date:
iname:	Christopher G. Zeieznik	
(Signature)_	Michael R. Malone	Date:
Name:	Michael R. Malone	
(Signature)		Date:
Name:	Ziv Hendel	
(Signature)	T	Date:
Name:	Ivan Krstic	
(Signature)		Date:
Name:	Anup K. Sharma	Date,

Customer No. 81310

Dean M. Munyon Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. P.O. Box 398 Austin, TX 78767-0398

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(Signature)		Date:	
Name:	Deepti S. Prakash		
(Signature) _	Lucia E. Ballard	Date:	
Name:	Lucia E. Ballard		
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	Jefrold V. Hauck	7/1/16	
(Signature) _	<u> </u>	——————————————————————————————————————	
manie.	periola V. Hauck		
(Simatura)		Date:	
Name:	Feng Tang	Date	
(Signature)		Date:	
Name:	Etai Littwin	2000 10 00 00 00	
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Name:	Pavan Kumar Anasosalu Vasu		
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(Signature)_	Gideon Littwin	Date:	فيعضي
andine.	NACOELIRAMIE		
(Signotura)		Date;	
Name:	Thorsten Gernoth	Date.	نبند
	en e		
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(Signature)_	Tucie Kneerwa	Date;	
Norman	Lucia Kuparaya		

(Signature)		Date;
Name:	Petr Kostka	
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(Signature)		Date;
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(Signature)_		Date:
	Gideon Littwin Thorsten Gernoth	Date:
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	Somman i Okigos	
(Signature)_		Date:
Namer	Andrei Kolin	
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Name:	Moshe Laifenfeld	
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inditte.	THORRAS F. WICHSCH	

(Signature)		Date:
Name:	Lynn R. Youngs	
(Signature) Name:	Christopher G. Zeleznik	Date:
(Signature) Name:	Michael R. Malone	Date:
(Signature) Name;	Ziv Hendel	Date:
(Signature) Name:	Ivan Krstic	Date:
(Signature) <sub>.</sub> Name:	Anup K. Sharma	Date:

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(Signature) _ Name:	Etai Littwin	Date: 12.02.18
(Signature) _ Name:	Pavan Kumar Anasosalu Vasu	Date:
(Signature) _ Name:	Gideon Littwin	Date: _72 . 07 .  Q
(Signature) _ Name:	Thorsten Gernoth	Date:
(Signature) Name:	Lucie Kucerova	Date:

(Signature)_		Date:
Name:	Petr Kostka	
(Signature) _	Steven P. Hotelling	Date:
Name:	Steven P. Hotening	
		12/2/2
(Signature) _ Name:	Eitan Hirsh	Date: 12/7/17
(Signatura)	14/	Date: 12 /7/18
Name:	Tal Kaitz	Date:
•	/	1
(Signature) _	Jonathan Pokrass	Date: 12/7/18
Name:	Jonathan Pokrass	
	·	1 1 1 1 1 1 1
(Signature) _	Angreli Andrei Kolin	Date: 11/1/18
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(6)	Moshe Laifenfeld	Date: 17/7/18
(Signature) _ Name:	Mostre Laifenfeld	Date:
(Signature)		Date:
Name:	Matthew C. Waldon	
(Signature) _	Thomas P. Mensch	Date:
Name:	Thomas P. Mensch	

(Signature)		Date:
Name:	Lynn R. Youngs	
(Signature) _ Name:	Christopher G. Zeleznik	Date:
(Signature) _ Name:	Michael R. Malone	Date:
(Signature) _ Name:	Ziv Hendel	Date: 12/7/2018
(Signature) _ Name:	Ivan Krstic	Date:
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(Signature) _ Name:	Thomas P. Mensch	Date;

Signature   Date:   Name: Lynn R. Youngs	(Signature)		Date:	
(Signature) Date:	Name:	Lynn R. Youngs		
(Signature) Date:	(Signature)		Date:	
(Signature) Date: Name: Ziv Hendel Date:  (Signature) Date: Name: Ivan Krstic  (Signature) Date:	Name:	Christopher G. Zeleznik		
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Name:         Ziv Hendel           (Signature)         Date:           Name:         Ivan Krstic           (Signature)         Date:	Name:	Michael R. Malone		
Name:         Ziv Hendel           (Signature)         Date:           Name:         Ivan Krstic           (Signature)         Date:	(Sionature)		Date	
Name:         Ivan Krstic           (Signature)    Date:	Name:	Ziv Hendel		•
Name:         Ivan Krstic           (Signature)    Date:				
Name:         Ivan Krstic           (Signature)    Date:	(Signature)		Date:	
	Name:	Ivan Krstic		
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Name:	Deepti S. Prakash			
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(Signature) Name:	Lucia E. Ballard	Date,		<del>Ang ar</del>
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Name:	Jerrold V. Hauck		jin	
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Name:	Etai Littwin	3		
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Name:	Pavan Kumar Anasosalu Vasu			
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(Signature) _		Date:		
Name:	Gideon Littwin			
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(Signature) _		ائلے: Date	4-14	<u> </u>
Name:	Thorsten Gernoth			
December 1980 Control Control		Dates		
	Lucie Kucerova	Date:		
Name:	Lucie Nucerova			

(Signature)_		Date:
Name:	Petr Kostka	
(Signature) _ Name:	Steven P. Hotelling	Date:
(Signature) _ Name:	Eitan Hirsh	Date:
(Signature) _ Name;	Tal Kaitz	Date:
(Signature) _ Name:	Jonathan Pokrass	Date:
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(Signature)_		Date:	
Name:	Lynn R. Youngs		
(Signature) _	Christopher G. Zeleznik	Date:	
Name:	Christopher G. Zeleznik	· · · · · · · · · · · · · · · · · · ·	
(Signature) _ Name:	Michael R. Malone	Date:	<del></del>
(Signature) _ Name:	Ziv Hendel	Date:	<del>Danisan</del> E '
	Ivan Krstic	Date:	
Name:	Ivan Krstic		
(Signature)	Anun K. Sharma	Date:	

Customer No. 81310

Dean M. Munyon

Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C.

P.O. Box 398

Austin, TX 78767-0398

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(Signature)		Date:	
Name:	Deepti S. Prakash		
(Signature) _ Name:	Lucia E. Ballard	Date:	
(Signature) _ Name:	Jerrold V. Hauck	Date:	<del></del>
(Signature) _ Name:	Feng Tang	Date:	
(Signature) _ Name:	Etai Littwin	Date:	
(Signature) _ Name:	Pavan Kumar Anasosalu Vasu	Date:	
(Signature) Name:	Gideon Littwin	Date:	<del></del>
(Signature) _ Name:	Thorsten Gernoth	Date:	81
(Signature) _	Lucie Kucerova	Date: 7/12/2013	

(Signature) _	Data V antha	Date:	
Name:	Petr Kostka		
(Signature) _ Name:	Steven P. Hotelling	Date:	
(Signature) _ Name:	Eitan Hirsh	Date:	
(Signature) _ Name:	Tal Kaitz	Date:	
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(Signature)_		Date:	
Name:	Lynn R. Youngs		
(Signature) <sub>-</sub> Name:	Christopher G. Zeleznik	Date:	
(Signature) _ Name:	Michael R. Malone	Date:	
(Signature) _ Name:	Ziv Hendel	Date:	
(Signature) _ Name:	Ivan Krstic	Date:	
(Signature) _ Name:	Anup K. Sharma	Date:	

Customer No. 81310

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Name:	Deepti S. Prakash		
(Signature) _ Name:	Lucia E. Ballard	Date:	
(Signature) Name:	Jerrold V. Hauck	Date:	
(Signature) _ Name:	Feng Tang	Date:	
(Signature) _ Name:	Etai Littwin	Date:	
(Signature) _ Name:	Pavan Kumar Anasosalu Vasu	Date:	
(Signature) _ Name:	Gideon Littwin	Date:	
(Signature) _ Name:	Thorsten Gernoth	Date:	
(Signature) Name:	Lucie Kucerova	Date:	

(Signature)	læde	Date: July 13th, 2018
Name:	Petr Kostka	
(Signature) Name:	Steven P. Hotelling	Date:
(Signature) Name:	Eitan Hirsh	Date:
(Signature) Name:	Tal Kaitz	Date:
(Signature) Name:	Jonathan Pokrass	Date:
(Signature) Name:	Andrei Kolin	Date:
(Signature) Name:	Moshe Laifenfeld	Date:
(Signature) Name:	Matthew C. Waldon	Date:
(Signature) Name:	Thomas P. Mensch	Date;

(Signature)_		Date:	
Name:	Lynn R. Youngs		
(Signature) _ Name:	Christopher G. Zeleznik	Date:	
(Signature) _ Name:	Michael R. Malone	Date:	
(Signature) _ Name:	Ziv Hendel	Date:	
(Signature) _ Name:	Ivan Krstic	Date:	
(Signature) _ Name:	Anup K. Sharma	Date:	

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PATENT REEL: 046669 FRAME: 0925

(Signature)		Date:
Name:	Deepti S. Prakash	
(Signature) _	Lucia E. Ballard	Date:
Name:	Lucia E. Ballard	
(Signature) _ Name:	Jerroid V. Hauck	Date:
(Signature)		Date:
Name:	Feng Tang	
(Signature) _	Etai Littwin	Date:
realise.	Edd Chtwin	
(Signature) _ Name:	Pavan Kumar Anasosalu Vasu	Date:
NOTE CONTRACTOR OF		Duane
(Signature) _ Name:	Gideon Littwin	Date:
(Signature)_	Thorsten Gernoth	Date:
Name:	Thorsten Gernoth	
(Signature) _ Name:	Lucic Kucerova	Date:

(Signature)		Date:
Name:	Petr Kostka	
(Signature) _ Name:	Steven P. Hotelling	Date:
(Signature) _ Name:	Eitan Hirsh	Date:
(Signature) _ Name:	Tal Kaitz	Date:
(Signature) _ Name;	Jonathan Pokrass	Date:
(Signature) _ Name:	Andrei Kolin	Date:
(Signature) _ Name:	Moshe Laifenfeld	Date:
(Signature) _ Name:	Matthew C. Waldon	Date: 7/12/18
(Signature) _ Name:	Thomas P. Mensch	Date:

(Signature)_		Date:	
Name:	Lynn R. Youngs		
(Signature)		Date:	
Name:	Christopher G. Zeleznik		
(Signature)		Date:	
Name:	Michael R. Malone		
(Signature)		Date:	
Name:			
(Signature)		Date:	
Name:	Ivan Krstic		
(Signature)	×	Date:	
	Anup K. Sharma	(in ) (277/277.7.7.3)	popiosi.

Customer No. 81310
Dean M. Munyon
Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C.
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(Signature)		Date:	
Name:	Deepti S. Prakash		
(Signature)	Lucia E. Ballard	Date:	**************
Name:	Lucia E. Ballard		
(Signature)	Jerrold V. Hauck	Date:	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>
Name:	Jerrold V. Hauck		
(Sionature)		Date:	
Name:	Feng Tang	3.24.64	<del> </del>
(Signature)		Date:	
Name:	Etai Littwin		
(Signature)		Date:	
Name:	Pavan Kumar Anasosalu Vasu		
(Signature)		Date:	
Name:	Gideon Littwin		
(Signature)	Thorsten Gernoth	Date:	
Name:	Thorsten Gernoth		
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(Signature)	Lucie Kucerova	Date:	

(Signature)		Date:
Name:	Petr Kostka	
(Signature) _ Name:	Steven P. Hotelling	Date:
(Signature) _ Name:	Eitan Hirsh	Date:
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(Signature) _ Name:	Thomas P. Mensch	Date: 7/10/18

(Signature)		Date:
Name:	Lynn R. Youngs	
(Signature)_	Christopher G. Zeleznik	Date:
Name:	Christopher G. Zeleznik	
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(Signature)		Date:
Name:	Michael R. Malone	
(Signature)		Date:
Name:	Ziv Hendel	
(Cianatura)		Data
Name:	Ivan Krstic	Date:
	Anun V. Shorma	Date:
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Customer No. 81310
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PATENT REEL: 046669 FRAME: 0933

(Signature)		Date:	
Name:	Deepti S. Prakash		
(Signature) _ Name:	Lucia E. Ballard	Date:	
(Signature) _ Name:	Jerrold V. Hauck	Date:	
(Signature) _ Name:	Feng Tang	Date:	
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(Signature) _ Name:	Pavan Kumar Anasosalu Vasu	Date:	
(Signature) Name:	Gideon Littwin	Date:	
(Signature) _ Name:	Thorsten Gernoth	Date:	
(Signature) Name:	Lucie Kucerova	Date:	

(Signature) _	Data V antha	Date:	
Name:	Petr Kostka		
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(Signature) _ Name:	Moshe Laifenfeld	Date:	
(Signature) _ Name:	Matthew C. Waldon	Date:	
(Signature) _ Name:	Thomas P. Mensch	Date:	

(Signature) Name	Lynn R. Youngs	Date
(Signature)Name	Christopher G. Zeleznik	Date:
(Signature) Name:	7241/A Michael R. Malone	Date: 7/14/224
(Signature) Name:	Ziv Hendel	Date
(Signature)Name	Ivan Krstie	Date:
(Signature) Name	Anup K. Sharma	Date:

Customer No. 81310

Dear M. Muryon Meverona, Hond. Kirkin, Kowari & Goatzel, P.C. P.O. Box 198 Austra, FX, 78767-0598

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PATENT REEL: 046669 FRAME: 0937

(Signature)		Date:	
Name:	Deepti S. Prakash		
(Signature) _ Name:	Lucia E. Ballard	Date:	
(Signature) _ Name:	Jerrold V. Hauck	Date:	
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(Signature) _ Name:	Moshe Laifenfeld	Date:	
(Signature) _ Name:	Matthew C. Waldon	Date:	
(Signature) _ Name:	Thomas P. Mensch	Date:	

(Signaturi	e)	
Name;	Lynn R. Youngs	Date:
(Signature	Christopher G. Zalamila	<b></b>
Name:	Christopher G. Zeleznik	Date:
(Signature)	)	5
Name:	Michael R. Malone	Date:
(Signature)	Ziv Hendal	
Name;	Ziv Hendel	Date;
(Signature)	Ivan Vesti.	
Name:	Ivan Krstie	Date:
Signature) _	Allen	_ Date: July 11,2018
Vame:	Anun K. Sharma	Date:

Customer No. 81310
Dean M. Munyon
Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C.
P.O. Box 398
Austin, TX 78767-0398

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