PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4878227

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
EMIL ZAK	05/03/2017
BIAO LIANG	12/15/2016

RECEIVING PARTY DATA

Name:	Huawei Technologies Co., Ltd.	
Street Address:	Huawei Administration Building	
Internal Address:	Bantian, Longgang District	
City:	Shenzhen, Guangdong	
State/Country:	CHINA	
Postal Code:	518129	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15111132

CORRESPONDENCE DATA

Fax Number: (312)616-5700

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: 312-616-5600

Email: assignments@leydig.com **Correspondent Name:** LEYDIG, VOIT & MAYER, LTD.

Address Line 1: TWO PRUDENTIAL PLAZA, SUITE 4900

Address Line 2: 180 N. STETSON AVENUE

Address Line 4: CHICAGO, ILLINOIS 60601-6731

ATTORNEY DOCKET NUMBER: HW723717 NAME OF SUBMITTER: LEANNA BULTEMA SIGNATURE: /Leanna Bultema/ **DATE SIGNED:** 03/22/2018

Total Attachments: 4

504831490

source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif

source=Assignment#page4.tif

ASSIGNMENT

WHEREAS, WE,

Emil Zak Huawei Technologies Duesseldorf GmbH, Riesstr. 25, 80992 Munich Germany; and

Biao Liang Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R. CHINA;

have invented and own a certain invention entitled:

Method for pattern processing

for which invention we have executed an application (provisional or non-provisional) for a U.S. patent, which was filed on 7/12/2016, under U.S. Application No. 15111132 and

WHEREAS, HUAWEI TECHNOLOGIES CO., LTD., of Huawei Administration Building, Bantian, Longgang District, Shenzhen, 518129, Guangdong, P.R. China, hereinafter referred to as Assignee, is desirous of acquiring the entire domestic and foreign right, title, and interest in and under the invention described in the patent application.

Now, THEREFORE, for good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, we assign and transfer to the Assignee and the Assignee's legal representatives, successors and assigns the full and exclusive rights in and to the invention in the U.S. and every foreign country and the entire right, title, and interest in and to the patent application and other such applications (e.g., provisional applications, non-provisional applications, continuations, continuations-in-part, divisionals, reissues, reexaminations, National phase applications, including petty patent applications, and utility model applications) that may be filed in the United States and every foreign country on the invention, and the patents, extensions, or derivations thereof, both foreign and domestic, that may issue thereon, and we do hereby authorize and request the Commissioner of Patents to issue U.S. patents to the above-mentioned Assignee agreeably with the terms of this assignment document.

WE HEREBY AUTHORIZE the Assignee to insert in this assignment document the filing date and application number of the application if the date and number are unavailable at the time this document is executed.

WE DO HEREBY COVENANT and agree with the Assignee that we will not execute any writing or do any act whatsoever conflicting with the terms of this assignment document set forth herein, and that we will at any time upon request, without further or additional consideration, but at the expense of the Assignee, execute such additional assignments and other writings and do such additional acts as the Assignee may deem necessary or desirable to perfect the Assignee's enjoyment of this assignment, and render all necessary assistance in making application for and obtaining original, continuation, continuation-in-part, divisional, reissued, reexamined, and National phase patents of the U.S. or of any and all foreign countries on the invention, and in enforcing any rights or chooses in action accruing as a

In re Appln. of Zak et al. Attorney Docket No. <u>HW72</u>3717

result of such applications or patents, and by executing statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of, the assigns and legal representatives of all parties hereto.

IN WITNESS WHEREOF, We have hereunder set our hands on the dates shown below.

Date	5/03/17	-Emil Zak	
Date		Biao LIANG	

ASSIGNMENT

WHEREAS, WE,

Emil Zak Huawei Technologies Duesseldorf GmbH, Riesstr. 25, 80992 Munich Germany; and

Biao Liang Huawei Administration Building Bantian, Longgang District Shenzhen, 518129, Guangdong P.R. CHINA;

have invented and own a certain invention entitled:

Method for pattern processing

for which invention we have executed an application (provisional or non-provisional) for a U.S. patent, which was filed on 7/12/2016, under U.S. Application No. 15111132 and

WHEREAS, HUAWEI TECHNOLOGIES CO., LTD., of Huawei Administration Building, Bantian, Longgang District, Shenzhen, 518129, Guangdong, P.R. China, hereinafter referred to as Assignee, is desirous of acquiring the entire domestic and foreign right, title, and interest in and under the invention described in the patent application.

Now, THEREFORE, for good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, we assign and transfer to the Assignee and the Assignee's legal representatives, successors and assigns the full and exclusive rights in and to the invention in the U.S. and every foreign country and the entire right, title, and interest in and to the patent application and other such applications (e.g., provisional applications, non-provisional applications, continuations, continuations-in-part, divisionals, reissues, reexaminations, National phase applications, including petty patent applications, and utility model applications) that may be filed in the United States and every foreign country on the invention, and the patents, extensions, or derivations thereof, both foreign and domestic, that may issue thereon, and we do hereby authorize and request the Commissioner of Patents to issue U.S. patents to the above-mentioned Assignee agreeably with the terms of this assignment document.

WE HEREBY AUTHORIZE the Assignee to insert in this assignment document the filing date and application number of the application if the date and number are unavailable at the time this document is executed.

WE DO HEREBY COVENANT and agree with the Assignee that we will not execute any writing or do any act whatsoever conflicting with the terms of this assignment document set forth herein, and that we will at any time upon request, without further or additional consideration, but at the expense of the Assignee, execute such additional assignments and other writings and do such additional acts as the Assignee may deem necessary or desirable to perfect the Assignee's enjoyment of this assignment, and render all necessary assistance in making application for and obtaining original, continuation, continuation-in-part, divisional, reissued, reexamined, and National phase patents of the U.S. or of any and all foreign countries

In re Appln. of Zak et al. Attorney Docket No. <u>HW723717</u>

on the invention, and in enforcing any rights or chooses in action accruing as a result of such applications or patents, and by executing statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of, the assigns and legal representatives of all parties hereto.

IN WITTNESS WHEREOF, We have hereunder set our hands on the dates shown below.

Date	Emil Zak	<i>\$</i>	
Date 2016-12-15	Biao Liang		