

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5288800

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
STT WEBOS, INC.	12/18/2018
RECEIVING PARTY DATA	
Name:	SYNKLOUD TECHNOLOGIES, LLC
Street Address:	124 BROADKILL ROAD, #415
City:	MILTON
State/Country:	DELAWARE
Postal Code:	19968
PROPERTY NUMBERS Total: 8	
Property Type	Number
Patent Number:	9219780
Patent Number:	9098526
Patent Number:	8868690
Patent Number:	8856195
Patent Number:	8606880
Patent Number:	9239686
Patent Number:	10015254
Application Number:	15992091
CORRESPONDENCE DATA	
Fax Number:	
<i>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.</i>	
Email:	ted.tsao@sttwebos.com
Correspondent Name:	SHENG TAI ("TED") TSAO
Address Line 1:	3906 BORG COMMON
Address Line 4:	FREMONT, CALIFORNIA 94538
NAME OF SUBMITTER:	SHENG TAI TSAO
SIGNATURE:	/shengtai tsao/
DATE SIGNED:	12/18/2018
This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 4

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EXHIBIT B

PATENT ASSIGNMENT AGREEMENT

WHEREAS, STT WebOS, LLC, having a place of business at 3906 Borgo Common, Fremont, CA 94538 U.S.A. (hereinafter, "Seller") is the sole and exclusive owner of certain United States and/or foreign patents and/or patent applications listed in Schedule A annexed hereto (collectively referred to as the "Patents"); and

WHEREAS SYNKLOUD TECHNOLOGIES, LLC, having a place of business at 124 Broadkill Road, #415 Milton, DE 19968 U.S.A. (hereinafter, "Purchaser") is desirous of acquiring the right, title and interest in, to and under the said Patents (and all foreign counterparts and related foreign patents).

Now, Therefore,

For good and valuable consideration, the receipt of which is hereby acknowledged, Seller does hereby sell, assign, transfer and set over to Purchaser, the Patents aforesaid, and any inventions claimed in said Patent, any reissue or reissues of said Patents already granted and which may be granted, any certificates of reexamination already granted and which may be granted the same to be held and enjoyed by Purchaser for its own use and enjoyment, and for the use and enjoyment of its successors, assigns or other legal representatives, to the end of the term or terms for which said Patents are or may be granted, reissued or extended as fully and entirely as the same would have been held and enjoyed by Seller, if this assignment and sale had not been made; together with all claims for damages by reason of past, current, and future infringement and/or provisional rights under said Patents, with the right to sue for, and collect the same for its own use and behalf, and for the use and behalf of its successors, assigns or other legal representatives.

And, Seller, hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all Letters Patents of the United States on said inventions to Purchaser as assignee of the entire interest, and hereby covenants that Seller has full right to convey the entire interest herein assigned, and that, except as otherwise provided between the Parties, Seller has not executed, and will not execute, any agreements in conflict therewith.

In Witness Whereof, Seller has caused this Patent Assignment Agreement to be executed by its duly authorized representative.

STT WebOS, LLC.

By: [Signature]
Name: SHENG TAI (TED) TSAO
Title: PRESIDENT
Date: 12/19/2018

State of _____

County of _____

On this _____ day of _____, 2018 before me personally appeared _____, to me known to be the person described herein and who executed the foregoing instrument, and acknowledged that he executed the same knowingly and willingly and for the purposes therein contained.

Witness my hand and Notarial seal the day and year immediately above written.

Please see attachment for notary

Notary Public

My Commission Expires:

Patent Assignment Agreement

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

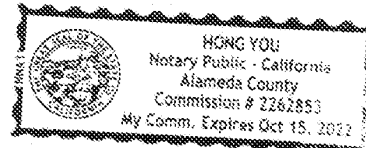
State of California
County of ALAMEDA

On DEC 17 2018 before me, HONG YOU NOTARY PUBLIC
(insert name and title of the officer)

personally appeared SHENG TAI TSAO
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature [Handwritten Signature] (Seal)

SCHEDULE A

Country	Application No.	Filing Date	Patent No.	Issued Date	Status	Title
US	14/623476	2015-02-16	9219780	2015-12-22	Issued	Method and system for wireless device access to external storage
US	14/150106	2014-01-08	9098526	2015-08-04	Issued	Method and system for wireless device access to external storage
US	14/079831	2013-11-14	8868690	2014-10-21	Issued	Method and system for wireless device access to external storage
US	14/153052	2014-01-12	8856195	2014-10-07	Issued	Method and system for wireless device access to external storage
US	10/726897	2003-12-04	8606880	2013-12-10	Issued	Method and system for wireless device access to external storage
US	14/036744	2013-09-25	9239686	2016-01-19	Issued	Method and system for wireless device access to external storage
US	14/977,509	2015-12-21	10,015,254	2018-07-03	Issued	System and method for wireless device access to external storage
US	15/992,091	2018-05-09			Pending	System and method for wireless device access to external storage

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5080053

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
TS PATENTS LLC	08/02/2018
RECEIVING PARTY DATA	
Name:	STT WEBOS, INC.
Street Address:	3906 BORGGO COMMON
City:	FREMON
State/Country:	CALIFORNIA
Postal Code:	94538
PROPERTY NUMBERS Total: 33	
Property Type	Number
Patent Number:	8812682
Patent Number:	9201961
Patent Number:	8892742
Patent Number:	9009314
Patent Number:	9015321
Patent Number:	9307055
Patent Number:	8745193
Patent Number:	8566463
Patent Number:	7418702
Patent Number:	9288266
Patent Number:	8909976
Patent Number:	9106677
Patent Number:	8903963
Patent Number:	8688772
Patent Number:	8639788
Patent Number:	8473596
Patent Number:	7379990
Patent Number:	9323757
Patent Number:	9317510
Patent Number:	9146932

Property Type	Number
Patent Number:	9390094
Patent Number:	8341258
Patent Number:	8589527
Patent Number:	8812640
Patent Number:	7945652
Patent Number:	8577839
Patent Number:	8977722
Patent Number:	9219780
Patent Number:	9239686
Patent Number:	9098526
Patent Number:	8868690
Patent Number:	8856195
Patent Number:	8606880

CORRESPONDENCE DATA

Fax Number:

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: 408-813-0536
Email: ted.tsao@sttwebos.com
Correspondent Name: SHENG TAI ("TED") TSAO
Address Line 1: 3906 BORG COMMON
Address Line 4: FREMON, CALIFORNIA 94538

NAME OF SUBMITTER:	SHENG TAI TSAO
SIGNATURE:	/shengtai tsao/
DATE SIGNED:	08/02/2018
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 4

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source=TS_Patents-Assgin-2-STT-WEBOS#page4.tif

PATENT ASSIGNMENT AGREEMENT

This Patent Assignment Agreement (the “Agreement”) is entered into effect on July 18, 2018 (the “Effective Date”) among Sheng Tai “Ted” Tsao, STT WEBOS, Inc. (“STT”, a Delaware corporation), and TS Patents LLC (“TS Patents”, a California limited liability company) (collectively the “Parties”), for assignment of the patents listed in Exhibit A (the “Patents”) as well as all pending and future patent applications claiming benefits of one or more of the Patents (the “Applications”).

Ted is the majority shareholder and President of STT and is a sole owner of TS Patents, yet STT does not have any percentage of ownership over the TS Patent, but maintained a good business relationship through agreement and contract. Ted is the sole inventor listed in all of the Applications and all but one of the Patents. Ted has assigned some of the Patents to STT. By this Agreement, Ted hereby assigns to STT the Patents and Applications that have not been assigned to STT, as his further investment in STT.

STT has assigned the Patents to TS Patents on January 19, 2017 for good business reasons. Now for other good consideration, TS Patents hereby assigns all the Patents and Applications back to STT (“Assignee”) except the Patent No. **9,280,547, 8,799,473, 8,713,442, and 8,396,891.**

The word “assign” is used in this Agreement to mean assigning 100% of the Ted’s and TS Patents’ right, title and interest in the Patents and Applications to the Assignee for the entire term of the Patents and any reissues or extensions and for the entire terms of any patents, reissues or extensions that may issue from foreign applications, divisions, continuations in whole or part or substitute applications filed claiming the benefit of the Patents or Applications. The right, title and interest thus assigned is to be held and enjoyed by the Assignee and Assignee's successors as fully and exclusively as it would have been held and enjoyed by the Ted had the assignment not been made.

The Parties hereby agree that, upon the execution of the Agreement, STT shall have the right, title and interest in the Patents and Applications. The Parties hereby authorize the United States Patent and Trademark Office to issue any patents resulting from any of the Applications to STT.


[End of Agreement; Signatures on the Next Page]

Ted (Sheng Tai "Ted" Tsao):



Sheng Tai "Ted" Tsao

STT WEBOS, Inc.:



Sheng Tai "Ted" Tsao
Chief Executive Officer

TS Patents LLC:



Sheng Tai "Ted" Tsao
General Manager

Exhibition A (Patents List)

1: Multitasking Family:

	Patent No.	Issue Date	Priority Date	Application No.	Filing Date
1)	8,812,682	08/19/2014	8/6/2002	13/345,581	01/06/2012
2)	9,201,961	12/01/2015	8/6/2002	13/625,121	09/24/2012
3)	8,799,473	08/05/2014	8/6/2002	12/075,314	03/04/2008
4)	8,892,742	11/18/2014	8/6/2002	13/448,807	04/17/2012
5)	9,009,314	04/14/2015	8/6/2002	13/154,109	06/06/2011
6)	9,015,321	04/21/2015	8/6/2002	12/079,521	03/27/2008
7)	9,307,055	04/05/2016	8/6/2002	14/513,695	10/14/2014
8)	8,745,193	06/03/2014	8/6/2002	13/420,954	03/15/2012
9)	8,566,463	10/22/2013	8/6/2002	12/079,482	03/27/2008
10)	7,418,702	09/26/2008	8/6/2002	10/713,904	08/06/2002

2: Centralized Cloud Operations Family:

	Patent No.	Issue Date	Priority Date	Application No.	Filing Date
1)	9,288,266	03/15/2016	08/12/2002	14/511,129	10/09/2014
2)	8,909,976	12/09/2014	08/12/2002	13/663,710	10/30/2012
3)	9,106,677	08/11/2015	08/12/2002	14/530,613	10/31/2014
4)	8,903,963	12/02/2014	08/12/2002	13/916,445	06/12/2013
5)	8,688,772	04/01/2014	08/12/2002	12/009,936	01/23/2008
6)	8,639,788	01/28/2014	08/12/2002	12/013,813	01/14/2008
7)	8,473,596	06/25/2013	08/12/2002	12/944,958	11/12/2010
8)	7,379,990	05/27/2008	08/12/2002	10/713,905	08/12/2002

3: Web Folder Family:

	Patent No.	Issue Date	Priority Date	Application No.	Filing Date
1)	9,323,757	04/26/2016	07/02/2004	14/076,117	11/08/2013
2)	9,317,510	04/19/2016	07/02/2004	14/020,582	09/06/2013
3)	9,280,547	03/08/2016	07/02/2004	13/914,515	06/10/2013
4)	9,146,932	09/29/2015	07/02/2004	13/041,316	03/04/2011
5)	9,390,094	07/12/2016	07/02/2004	14/077,442	11/12/2013
6)	8,341,258	12/25/2012	07/02/2004	13/434,767	03/29/2012
7)	8,589,527	11/19/2013	07/02/2004	13/050,871	03/17/2011
8)	8,812,640	09/09/2014	07/02/2004	12/709,434	02/19/2010
9)	7,945,652	05/17/2011	07/02/2004	11/374,302	07/02/2004

4: Information Sharing Family:

	Patent No.	Issue Date	Priority Date	Application No.	Filing Date
1)	8,713,442	04/29/2014	03/31/2006	13/080,007	04/05/2011
2)	8,396,891	03/12/2013	03/31/2006	13/326,178	12/14/2011
3)	8,577,839	11/05/2013	03/31/2006	12/511,039	07/28/2009
4)	8,977,722	03/10/2013	03/31/2006	13/468,716	05/10/2012

5: Cloud Storage Family:

	Patent No.	Issue Date	Priority Date	Application No.	Filing Date
1)	9,219,780	12/22/2015	12/04/2003	14/623,476	02/16/2015
2)	9,239,686	01/19/2016	12/04/2003	14/036,744	09/25/2013
3)	9,098,526	08/04/2015	12/04/2003	14/150,106	01/08/2014
4)	8,868,690	10/21/2014	12/04/2003	14/079,831	11/14/2013
5)	8,856,195	10/07/2014	12/04/2003	14/153,052	01/12/2014
6)	8,606,880	12/10/2013	12/04/2003	10/726,897	12/04/2003

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4277893

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
STT WEBOS, INC.	02/16/2017
SHENG TAI TSAO	02/16/2017
RECEIVING PARTY DATA	
Name:	TS PATENTS LLC
Street Address:	P.O.BOX 1712
City:	FREMONT
State/Country:	CALIFORNIA
Postal Code:	94538
PROPERTY NUMBERS Total: 38	
Property Type	Number
Patent Number:	8799473
Patent Number:	9015321
Patent Number:	9201961
Patent Number:	9307055
Patent Number:	9009314
Patent Number:	8892742
Patent Number:	8812682
Patent Number:	8745193
Patent Number:	8566463
Patent Number:	8856195
Patent Number:	8606880
Patent Number:	8868690
Patent Number:	9239686
Patent Number:	9219780
Patent Number:	9098526
Patent Number:	9448697
Patent Number:	8977722
Patent Number:	8713442
Patent Number:	8577839

Property Type	Number
Patent Number:	8396891
Patent Number:	9449009
Patent Number:	9390094
Patent Number:	9323757
Patent Number:	9317510
Patent Number:	9280547
Patent Number:	9146932
Patent Number:	8812640
Patent Number:	8589527
Patent Number:	8341258
Patent Number:	7945652
Patent Number:	7379990
Patent Number:	8473596
Patent Number:	8639788
Patent Number:	8688772
Patent Number:	8903963
Patent Number:	8909976
Patent Number:	9106677
Patent Number:	9288266

CORRESPONDENCE DATA

Fax Number: (510)580-8592

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: 408-813-0536

Email: ted.tsao@sttwebos.com

Correspondent Name: SHENG TAI TSAO

Address Line 1: 3906 BORGIO COMMON

Address Line 4: FREMONT, CALIFORNIA 94538

NAME OF SUBMITTER:	SHENG TAI TSAO
SIGNATURE:	/shengtai tsao/
DATE SIGNED:	02/16/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 2

source=PATENT ASSIGNMENT AGREEMENT (Tsao & STT)#page1.tif

source=PATENT ASSIGNMENT AGREEMENT (Tsao & STT)#page2.tif

PATENT ASSIGNMENT AGREEMENT

This Patent Assignment Agreement (the “*Agreement*”) is entered into effect on January 1, 2017 (the “*Effective Date*”) among Sheng Tai “Ted” Tsao (“*Tsao*”), STT WEBOS, Inc. (“*STT*”, a Delaware corporation), and TS Patents LLC (“*TS Patents*”, a California limited liability company) (collectively the “*Parties*”), for assignment of the patents listed in Exhibit A (the “*Patents*”) as well as all pending and future patent applications claiming benefits of one or more of the Patents (the “*Applications*”).

WHEREAS, two of the Patents, U.S. Pat. Nos. 7,945,652 and 8,396,891, and Applications claiming priority to the two patents, are owned by STT and shall be referred to in this Agreement as the “*STT IP*”;

WHEREAS, All of the Patents and Applications other than the STT IP are owned by Tsao and shall be referred to in this Agreement as the “*Tsao IP*”;

THEREFORE, the Parties hereby agree:

1. STT assigns the STT IP to TS Patents. In exchange, STT shall be entitled to a share of TS Patents’ net profit generated from licensing or sale of the STT IP, as the details of such sharing plan shall be set forth in a separate memorandum.

2. Tsao assigns the Tsao IP to TS Patents in exchange for the shares of TS Patents.

3. The word “assign” is used in this Agreement to mean assigning 100% of the assignor’s right, title and interest in the Patents and Applications to the assignee for the entire term of the Patents and any reissues or extensions and for the entire terms of any patents, reissues or extensions that may issue from foreign applications, divisions, continuations in whole or part or substitute applications filed claiming the benefit of the Patents or Applications. The right, title and interest thus assigned is to be held and enjoyed by the assignee and assignee's successors as fully and exclusively as it would have been held and enjoyed by the assignor had the assignment not been made.

4. Upon the execution of the Agreement, TS Patents shall have the right, title and interest in the Patents and Applications. The Parties hereby authorize the United States Patent and Trademark Office to issue any patents resulting from any of the Applications to TS Patents.

[End of Agreement; Signatures on the Next Page]

Sheng Tai “Ted” Tsao:



Sheng Tai “Ted” Tsao

STT WEBOS, Inc.:



By: Sheng Tai “Ted” Tsao
Chief Executive Officer

TS Patents LLC:



By: Sheng Tai “Ted” Tsao
General Manager

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 8,868,690 B2
APPLICATION NO. : 14/079831
DATED : October 21, 2014
INVENTOR(S) : Sheng Tai Ted Tsao

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

A) IN THE SPECIFICATION:

In col. 3, line 25, please delete the “implemented”;
In col. 3, line 27, please replace “server (3)” with ---server (3) or---;

B) IN THE CLAIMS:

In col. 6, line 51, Claim 10, please replace the “retrieve” with ---or retrieve---.

Signed and Sealed this
Twenty-seventh Day of January, 2015



Michelle K. Lee
Deputy Director of the United States Patent and Trademark Office

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Sheng Tai (Ted) Tsao, et al.
TITLE: The Use of Wireless Devices' External Storage
PATENT No.: 8,868,690
ISSUE DATE: 10/21/2014
EXAMINER: El Hadji Sall
ART UNIT: 2457
APPLICATION No.: 14/079,831
Confirmation No.: 9132

REQUEST FOR CERTIFICATE of Correction Pursuant To 37 C.F.R §1.323

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Enclosed, in duplicate, is a Certificate of Correction, Form PTO-SB/44, for United States Patent Number 8,868,690 issued October 21, 2014.

A) IN THE CLAIMS:

In col. 6, line 51, please replace the "retrieve" with ---or retrieve---;

Applicant submits that the fix to the noted errors do not constitute new matter because it matches the use of "retrieving" presented in col. 6 line 5 for same scenario of the letter patent, thus the correction thereof would not require reexamination.

B) IN THE SPECIFICATION:

In col. 3, line 25, please delete the "implemented";;

In col. 3, line, 27, please replace "server (3)" with ----server (3) or----;

Applicant submits that the above corrections restore the original meaning in page 3, lines 34 – 37 for the specification for parent application 10/726,897 filed on 12/04/2003 and the noted errors do not constitute new matter, and correction thereof would not require reexamination.

Pursuant to 37 C.F.R §1.323, Applicant requests that the enclosed Certificate of Correction be approved.

Since each one of the noted errors is not the fault of the Patent Office, payment is enclosed of the required fee of \$100.00.

The above-identified fees are being paid by credit card via EFS-Web.

Respectively Submitted

Date : 10/29/2014

By: /shengtai tsao/

Sheng Tai (Ted) Tsao

3906 Borgo Common

Fremont, CA 94538

408-813-0536

510-580-8592

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**Page 1 of 2

PATENT NO. : 8,868.690
APPLICATION NO.: 14/079,831
ISSUE DATE : 10/21/2014
INVENTOR(S) : Sheng Tai (Ted) Tsao

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

A) IN THE CLAIMS:

Col. 6, line 51, please replace the "retrieve" with ---or retrieve---;

B) IN THE SPECIFICATION:

In col. 3, line 25, please delete the "implemented";

In col. 3, line 27, please replace "server (3)" with ----server (3) or----;

MAILING ADDRESS OF SENDER (Please do not use customer number below):

3906 Borgo Common,
Fremont, CA 94538

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. 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 1.0 hour 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: Attention Certificate of Corrections Branch, 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.

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.

Electronic Patent Application Fee Transmittal

Application Number:	14079831			
Filing Date:	14-Nov-2013			
Title of Invention:	System And Method For Support Wireless Device Access To External Storage			
First Named Inventor/Applicant Name:	Sheng Tai Tsao			
Filer:	Sheng Tai Tsao			
Attorney Docket Number:				
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Certificate of Correction	1811	1	100	100
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				100

Electronic Acknowledgement Receipt

EFS ID:	20547023
Application Number:	14079831
International Application Number:	
Confirmation Number:	9132
Title of Invention:	System And Method For Support Wireless Device Access To External Storage
First Named Inventor/Applicant Name:	Sheng Tai Tsao
Customer Number:	77501
Filer:	Sheng Tai Tsao
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	29-OCT-2014
Filing Date:	14-NOV-2013
Time Stamp:	13:11:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$100
RAM confirmation Number	12086
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
-----------------	----------------------	-----------	-------------------------------------	------------------	------------------

1	Request for Certificate of Correction	831-certificate-correction.pdf	27404 8a692084ae0f95c40bdfbfa575967626d0c06381	no	2
Warnings:					
Information:					
2	Request for Certificate of Correction	831req-certificate-sb0044.pdf	164543 4a0db3a3a2ec146b3ba5f2db6710ae777184f4d7	no	2
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	29523 70e7b4d05192576a12e644aecece065fbd4b6fd	no	2
Warnings:					
Information:					
Total Files Size (in bytes):				221470	
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., ISSUE DATE, PATENT NO., ATTORNEY DOCKET NO., CONFIRMATION NO.
Row 1: 14/079,831, 10/21/2014, 8868690, (blank), 9132

77501 7590 10/01/2014
Sheng Tai (Ted) Tsao
3906 Borgo Common.
Fremont, CA 94538

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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

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

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

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

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

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

Sheng Tai (Ted) Tsao, Fremont, CA, Assignee (with 37 CFR 1.172 Interest);
Sheng Tai Tsao, Fremont, CA;

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



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

77501 7590 09/19/2014
Sheng Tai (Ted) Tsao
3906 Borgo Common.
Fremont, CA 94538

EXAMINER

SALL, EL HADJI MALICK

ART UNIT PAPER NUMBER

2457

DATE MAILED: 09/19/2014

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

14/079,831 11/14/2013 Sheng Tai Tsao 9132

TITLE OF INVENTION: System And Method For Support Wireless Device Access To External Storage

Table with 7 columns: APPLN. TYPE, ENTITY STATUS, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional SMALL \$480 \$0 \$0 \$480 12/19/2014

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

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

HOW TO REPLY TO THIS NOTICE:

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

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

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

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

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

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

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 or Fax (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)

77501 7590 09/19/2014
Sheng Tai (Ted) Tsao
 3906 Borgo Common.
 Fremont, CA 94538

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/079,831	11/14/2013	Sheng Tai Tsao		9132

TITLE OF INVENTION: System And Method For Support Wireless Device Access To External Storage

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	12/19/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
SALL, EL HADJI MALICK	2457	709-219000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.</p>	<p>2. For printing on the patent front page, list</p> <p>(1) The names of up to 3 registered patent attorneys or agents OR, alternatively, _____ 1</p> <p>(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. _____ 2</p> <p>_____ 3</p>
---	---

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 has been filed for recordation as set forth in 37 CFR 3.11. 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

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
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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. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

77501 7590 09/19/2014
Sheng Tai (Ted) Tsao
3906 Borgo Common.
Fremont, CA 94538

EXAMINER

SALL, EL HADJI MALICK

ART UNIT PAPER NUMBER

2457

DATE MAILED: 09/19/2014

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.

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 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, 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. 14/079,831	Applicant(s) TSAO ET AL.	
	Examiner EL HADJI SALL	Art Unit 2457	AIA (First Inventor to File) 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 09/09/2014.
 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 11-14, 16-19, 21, 24-25 and 27-35. 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. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Examiner's Amendment/Comment |
| 2. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 6. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| 3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. <input type="checkbox"/> Other _____. |
| 4. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/EL HADJI SALL/
Primary Examiner, Art Unit 2457

Search Notes 	Application/Control No. 14079831	Applicant(s)/Patent Under Reexamination TSAO ET AL.
	Examiner EL HADJI SALL	Art Unit 2457

CPC- SEARCHED		
Symbol	Date	Examiner


CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
709	219,203,226,220,200.	8/24/2014	ES
455	412.1,899.	8/24/2014	ES

SEARCH NOTES		
Search Notes	Date	Examiner
Updated Non Patent Litterature Search	9/15/2014	ES
Updated East Search	9/15/2014	ES
Updated CPC Search	9/15/2014	ES

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
709	219,203	9/15/2014	ES
455	899	9/15/2014	ES


	/EL HADJI SALL/ Primary Examiner.Art Unit 2457
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Issue Classification 	Application/Control No. 14079831	Applicant(s)/Patent Under Reexamination TSAO ET AL.	
	Examiner EL HADJI SALL	Art Unit 2457	

CPC					
Symbol				Type	Version
G06F	17		30194	F	2013-01-01
G06F	17		30067	I	2013-01-01
H04L	67		06	I	2013-01-01
H04L	67		1097	I	2013-01-01
H04L	67		02	I	2013-01-01
H04L	67		2842	I	2013-01-01


CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/EL HADJI SALL/ Primary Examiner.Art Unit 2457	09/15/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification 	Application/Control No. 14079831	Applicant(s)/Patent Under Reexamination TSAO ET AL.
	Examiner EL HADJI SALL	Art Unit 2457

US ORIGINAL CLASSIFICATION					INTERNATIONAL CLASSIFICATION								
CLASS		SUBCLASS			CLAIMED				NON-CLAIMED				
709		219			G	0	6	F	15 / 16 (2006.01.01)				
CROSS REFERENCE(S)													
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)												
709	219	203											
455	899												

NONE		Total Claims Allowed:	
		20	
(Assistant Examiner)	(Date)		
/EL HADJI SALL/ Primary Examiner. Art Unit 2457	09/15/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification 	Application/Control No. 14079831	Applicant(s)/Patent Under Reexamination TSAO ET AL.
	Examiner EL HADJI SALL	Art Unit 2457

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant		<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47									
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
/	1	6	17	18	33										
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3	13	14	29												
4	14	15	30												
/	15	16	31												
5	16	17	32												

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/EL HADJI SALL/ Primary Examiner.Art Unit 2457	09/15/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	"20130091298"	US-PGPUB; USPAT	OR	ON	2014/09/15 23:24
L2	1	"8606880".pn.	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L3	54336	709/219,203,226,220,200.ccls. 455/412.1,899.ccls.	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L4	151020	(H04L 49/9005)	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L5	54336	709/219,203,226,220,200.ccls. 455/412.1,899.ccls.	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L6	199519	L5 L4	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L7	84817	server same wireless near3 (device terminal)	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L8	6946	(assign\$5 allocat\$5) near3 storage near space	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L9	84817	server same wireless near3 (device terminal)	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L10	6946	(assign\$5 allocat\$5) near3 storage near space	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L11	113	L9 and L10	USPAT	OR	OFF	2014/09/15 23:28
L12	2	L9 same L10	USPAT	OR	OFF	2014/09/15 23:28
L13	5	L9 same L10	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L14	0	L13 and @ad<"20031204"	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L15	0	((assign\$5 allocat\$5) near3 storage near space) and wireless and server).ab.	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L16	1	((assign\$5 allocat\$5) near3 space) and wireless and server).ab.	US-PGPUB; USPAT	OR	ON	2014/09/15 23:28
L17	512	((assign\$5 allocat\$5) and wireless and	US-	OR	ON	2014/09/15

		server).ab.	PGPUB; USPAT			23:28
L18	319	L9 and L10	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L19	0	L17 and L18	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L20	32	((assign\$5 allocat\$5) near3 space) and server and device).ab.	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L21	56190	(assign\$5 allocat\$5) near3 space	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L22	32	L20 and L21	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L23	15	L22 and @ad< "20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L24	4	L23 and wireless	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L25	122	folder near3 storage near space	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L26	4	creat\$5 near folder near3 storage near space	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L27	0	L26 and @ad< "20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L28	25	L25 and @ad< "20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L29	5	L28 and creat\$5 near folder	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L30	6	creat\$5 near3 structured near folder	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L31	0	L30 and @ad< "20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L32	117	structured near folder	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L33	0	creat\$5 near3 foler near structur\$5	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L34	0	creat\$5 near3 fodler near structur\$5	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L35	347	creat\$5 near3 folder near structur\$5	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L36	71	updat\$5 near3 folder near structur\$5	US-	OR	ON	2014/09/15

EAST Search History

			PGPUB; USPAT			23:28
L37	13	L35 and L36	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L38	0	L37 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L39	83	L35 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L40	10	L36 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L41	6	server near3 space near3 wireless near device	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L42	0	L41 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L43	40	server near3 space near3 wireless	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L44	3	L43 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L45	23	L39 and wireless	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L46	18	(creat\$5 near3 folder near structur\$5).ab.	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L47	1	L45 and L46	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L48	227	(store storage space memory) near3 (allocat\$5 provid\$5 assign\$5) near3 wireless near device	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L49	259	((store storage space memory) and (allocat\$5 provid\$5 assign\$5) and wireless near device).ab.	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L50	16	L48 and L49	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L51	3	L50 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L52	47	(allocat\$5 assign\$5 provid\$5) near3 space near3 wireless near device	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L53	13	L52 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L54	11	provid\$5 near3 space near3 wireless near device	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L55	0	L54 and @ad<"20031204"	US-	OR	ON	2014/09/15

			PGPUB; USPAT			23:28
L56	658	space near3 wireless near device	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L57	73	L56 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L58	33	L56 same server	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L59	10	L58 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L60	14	("20020059621" "20020123336" "20020128036" "20020133597" "20030191716" "6351776" "6356941" "6714968" "6735623" "6839743" "6985927" "7506034" "7650621" "7894803").PN. OR ("8606880").URFN.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/09/15 23:28
L61	14	L60 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L62	9	L61 and wireless	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L63	2843	space near3 (wireless mobile) near device	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L64	1	L35 and L63	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L65	755	storage near servers same (portable wireless) near device	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L66	4	L35 and L65	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L67	67	L65 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L68	176	storage near servers same (portable wireless) near devices	US- PGPUB; USPAT	OR	OFF	2014/09/15 23:28
L69	19	L68 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L70	19	L69 and L65	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L71	7	L61 and storage and (portable wireless) near3 (network device)	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L72	8	L61 and storage near space	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L73	1	"20140089360"	US-	OR	ON	2014/09/15

EAST Search History

			PGPUB; USPAT			23:28
L74	10	L36 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L75	6	updat\$5 near3 folder near structur\$5 near6 request\$5	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28
L76	0	L75 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/09/15 23:28

9/ 15/ 2014 11:30:27 PM

C:\ Users\ esall\ Documents\ EAST\ Workspaces\ 14079831.wsp

Electronic Patent Application Fee Transmittal

Application Number:	14079831				
Filing Date:	14-Nov-2013				
Title of Invention:	System And Method For Support Wireless Device Access To External Storage				
First Named Inventor/Applicant Name:	Sheng Tai Tsao				
Filer:	Sheng Tai Tsao				
Attorney Docket Number:					
Filed as Small Entity					
Utility under 35 USC 111(a) Filing Fees					
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)	
Basic Filing:					
Pages:					
Claims:					
Miscellaneous-Filing:					
Petition:					
Patent-Appeals-and-Interference:					
Post-Allowance-and-Post-Issuance:					
Utility Appl Issue Fee	2501	1	480	480	
Extension-of-Time:					

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				480

Electronic Acknowledgement Receipt

EFS ID:	20187908
Application Number:	14079831
International Application Number:	
Confirmation Number:	9132
Title of Invention:	System And Method For Support Wireless Device Access To External Storage
First Named Inventor/Applicant Name:	Sheng Tai Tsao
Customer Number:	77501
Filer:	Sheng Tai Tsao
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	19-SEP-2014
Filing Date:	14-NOV-2013
Time Stamp:	12:29:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$480
RAM confirmation Number	9938
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Issue Fee Payment (PTO-85B)	831-payment.pdf	218094	no	1
			8cd5a0fcb0cfea131c8a582d70ad92744e6d7b		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	29733	no	2
			f282d04665fe9a824ed94b9f5c77e2d21e583621		
Warnings:					
Information:					
Total Files Size (in bytes):				247827	
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					



UNITED STATES PATENT AND TRADEMARK OFFICE

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www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
14/079,831 11/14/2013 Sheng Tai Tsao 9132

77501 7590 09/12/2014
Sheng Tai (Ted) Tsao
3906 Borgo Common.
Fremont, CA 94538

EXAMINER

SALL, EL-HADJI MALICK

ART UNIT PAPER NUMBER

2457

NOTIFICATION DATE DELIVERY MODE

09/12/2014

ELECTRONIC

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

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

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

ted.tsao@sttwebos.com
ted.tsao@yahoo.com
ted.tsao@comcast.net

Applicant-Initiated Interview Summary	Application No. 14/079,831	Applicant(s) TSAO ET AL.	
	Examiner EL HADJI SALL	Art Unit 2457	

All participants (applicant, applicant's representative, PTO personnel):

(1) EL HADJI SALL. (3) _____.

(2) Shen Tai Tsao. (4) _____.

Date of Interview: 09 September 2014.

Type: Telephonic Video Conference
 Personal [copy given to: applicant applicant's representative]

Exhibit shown or demonstration conducted: Yes No.
If Yes, brief description: _____.

Issues Discussed 101 112 102 103 Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 11.

Identification of prior art discussed: 20040186750 and. 20030072031.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Discussed proposed amendment. Applicant will file the proposed amendment and a terminal disclaimer. No agreement was made.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the 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.

Attachment

/EL HADJI SALL/
Primary Examiner, Art Unit 2457

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Sheng Tai (Ted) Tsao, et al.
APPLICATION No.: 14/079,831 Confirmation No. 9132
FILING DATE: 11/14/2013
TITLE: The System And Method For Support Wireless Device Access to
External Storage
EXAMINER: Sall, EL Hadji Malick
ART UNIT: 2457

Mail Stop **Amendment**
COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

Response To Non-Final Office Action For The Application 14/079,831

Dear Commissioner:

This communication responds to the non-final office action mailed on 08/29/2014. Enclosed, please find:

1) The amendments to the claims start on the page 3 of this paper, the amendments include canceling claims 15, 20, 22 – 23 and 26, and adding new claims from 30 – 35.

There is no fee due since the total number of the claims is equal to the 20;

2) The support to the claims starts on the page 2 of this paper.

3) A remark from Applicant for overcome the office rejection is also provided.

4) Applicant appreciates interview opportunity with examiner on 9/9/2014.

5) A terminal disclaimer is also filed.

Thanks helps from the USPTO to enter the amended claims of instant application.

Respectively Submitted.

09/09/2014

/Shanegtai Tsao/
Sheng Tai (Ted) Tsao
2979 Heidi Drive,
San Jose, CA 95132
408-813-0536 or 510-580-8592

EXEMPLARY SUPPORT:

claims	Disclosed In parent Application 10/726,897	
11, 24, 31	a) page 2, lines 29 – 33; b) page 4 lines 1-2; and; c) page 5, lines 3- 7	
	a) page 3, lines 22 – 25; b)page 5, lines 8 – 12; c) page 4, line 40 – page 5 line 2	
	a) page 5, lines 28–30; b) page 5,lines 33-35; c) page 6, lines 17-20	
16	a) page 5, lines 8 – 12;	
12 & 32	a) page 3, lines 22-25; b) page 5, lines 8-12; c) page 5, lines 23-26	.
13, 30, & 33	a) page 3, lines 2 – 5; b) page 5, lines 28–30; c) page 6, lines 21 – 25;	
14, 27 & 34	a) Page 3, lines 22-25; b) page 5, lines 8-12; c) page 5, lines 23 – 26;	space
19, 25 & 35	a) page 4, lines 9 – 11; b) Fig. 3; c) page 5, line 37 - page 6, line 20;	
21	a) page 4, lines 23 – page 5, line 2	

AMENDMENT IN THE CLAIMS:

1 – 10 (*Canceled*)

11. (*Currently Amended*) A server providing storage space to wireless device, the server comprising:

at least one storage device, ~~configured with at least one storage space~~ and a storage medium comprising program code that, when executed by the server, causes the server to:

~~allocate, via the at least one storage device, a the storage space of a predefined capacity to be accessible to the a wireless device, create a folder structure residing in the storage space, wherein the storage space being remotely located with respect to the wireless device;~~

establish a link for the wireless device access to the folder structure in the storage space; and

~~couple with update the folder structure whenever a user from the wireless device for allowing a user thereof access to performs an operation to the folder structure in the storage space for storing a data object therein or retrieving a data object therefrom, the storing of a data object including to download a file from a remote web server directly into the storage space.~~

12. (*Currently Amended*) The server as recited in claim 11, wherein the access to updating of the folder structure comprises: ~~updating the folder structure in response to a request, received creating~~ from the wireless device, for ~~creating~~ a folder in the folder structure.

13. (*Currently Amended*) The server as recited in claim 11+2, ; wherein the updating of the folder structure comprises: ~~updating the folder structure in response to a request, received from the wireless device, for access to the folder in the folder structure for storing data therein or retrieving data therefrom, wherein the data object further is a file or a message, or a multimedia data of video, digital music or photo picture.~~

14. (*Currently Amended*) The server as recited in claim ~~12+3~~, wherein the access to updating of the folder structure comprises: updating the folder structure in response to a request, received storing, from the wireless device, a data object into the folder in the folder structure; or for deleting or moving or copying or renaming, from the wireless device, a file or a folder being stored in the folder structure.

15. (*Canceled*)

16. (*Currently Amended*) The server as recited in claim ~~11+2~~, wherein the folder structure is created with multiple folders on a file system configured in the storage space accessible to the wireless devices.

17. (*Currently Amended*) The server as recited in claim ~~14+2~~, wherein the user of the wireless device is allowed via a web browser executed thereof to perform said operation to the file or folder in the folder structure in the storage space.

18. (*Currently Amended*) The server as recited in claim ~~11+2~~, wherein the link is includes wireless communication media.

19 (*Currently Amended*) The server as recited in claim 11, wherein the A-method for a wireless device downloading of a file comprises comprising:
obtaining, ~~by the wireless device,~~ download information for the a file from the a remote web server;
transmitting the download information cached in the wireless device to the a storage server; and
causing the storage server in accordance with the downloading information to download the file from the remote web server directly into the a storage space ~~configured in the storage server.~~

20. (*Canceled*)

21. (*Currently Amended*) ~~The server method as recited in claim 1819, wherein further comprising: facilitating a console for an administrator of a service provider to partition the at least one storage device for allocating the storage space to the wireless device is configured in a storage device residing in the storage server and comprises a file system.~~

22 – 23 (*Canceled*)

24. (*Currently Amended*) ~~A server system supporting wireless device downloading file; the system comprising:
-----a plurality of at least one storage devices server and
one wireless device;
wherein at least a first one of the storage devices server is configured with at least one
a storage space of a predefined capacity allocated to a wireless device and allow
the wireless device via a wireless link remotely access to the storage space; said
access to the storage space including to store a data object therein or retrieve a
data object therefrom,
wherein the storage space is remotely located with respect to the wireless device, and
wherein the server is configured to couple with the wireless device is configured for to
allowing a user on the wireless device thereof to download a file from a remote
web server directly into the allocated storage space in the storage server instead of
downloading the file into the wireless device itself.~~

25. (*Currently Amended*) ~~The server system as recited in the claim 24, wherein said
downloading of a file from a remote web server comprises:
obtaining, by the wireless device, download information for the file from the
remote web server;
transmitting the download information cached in the wireless device to the storage
server; and~~

causing the ~~storage server~~ in accordance with the downloading information to download the file from the remote web server directly into the storage space allocated to the wireless device.

26. *(Canceled)*

27. *(Currently Amended)* The ~~server system~~ as recited in claim 24, wherein the ~~storage space is configured in a storage device residing in the storage server and comprises a file system coupled with the wireless device for allowing the user thereof performing an operation for a data object in the storage space, including to store a file or create a folder therein, or delete or move or copy or rename a file or a folder stored therein.~~

28. *(Currently Amended)* The ~~server system~~ as recited in claim 24, wherein the ~~remote web server is accessible through the world wide web and comprises at least one downloadable data object further is a file.~~

29. *(Currently Amended)* The system as recited in claim 24, ~~further comprising: wherein at least a second one of the storage devices is configured with a storage space of a predefined capacity allocated to a wireless device and allow the wireless device via the link includes wireless link access to the storage space communication media.~~

30. *(New)* The server as recited in claim 24, wherein the data object further is a message, or a multimedia data of video or digital music or photo picture.

31. *(New)* A non-transitory computer-readable medium, residing in a server, comprising:
program instructions that, when executed by the server, cause the server to:
allocate a storage space of a predefined capacity for each of a plurality of wireless devices;
establish a wireless link for the each of the wireless devices access to the storage space allocated; and
couple with the each of the wireless devices for allowing a user thereof access to the storage space for storing a data object therein or retrieving a data object

therefrom, the storing of a data object including to download a file from a remote web server directly into the storage space.

32. (*New*) The computer-readable medium of claim 31, wherein said access to the storage space comprises: creating, from the each of the wireless devices, a folder in the storage space.
33. (*New*) The computer-readable medium of claim 31, wherein the data object further is a message or a multimedia data of video, music, or picture.
34. (*New*) The computer-readable medium of claim 32, wherein the access to the storage space comprises: storing, from the each of the wireless devices, a data object into the folder in the storage space; or deleting or moving or copying or renaming, from the each of the wireless device, a file or folder in the storage space.
35. (*New*) The computer-readable medium of claim 31, wherein said downloading of a file further comprises:
obtain, by the each of the wireless devices, the downloading information for the file from the remote web server;
transmitting the downloading information cached in the each of the wireless devices to the server; and
causing the server in accordance with the downloading information to download the file directly from the remote web server into the storage space allocated to the each of the wireless devices

Remark

The Office Action mailed on 08/29/10⁴ has been carefully considered. Claims 11 - 29 are previously pending and all pending claims stand rejected. The claims are amended including canceling the claims 15, 20 – 23, 26, 29 and adding new claims 30 – 36 in response to the office action for more directly pointing to the patentable limitation of instant application. Applicant respectfully requests reconsideration of the instant application in light of the amendments above and the remarks made below:

1. Regarding The 35 USC §103 Rejections:

The Office Action of 08/29/2014 rejected claims 11-29 under 35 U.S.C. 103(a) as being obvious over Jhingan et al., US 20020133597 hereinafter "Jingan in view of Surbey et al. US 20040186750, further in view of Kuwata et al. US 20030072031 .

Without admitting that Jhingan, Surbey and Kuwata are prior art and reserving the right to establish that they are not prior art. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *in re Royka*, 490 f. 2d 98 1, 180 Uspq 580 (CCPA 1974). in other words, each and every element (or limitation) in a claim must be taught somewhere in the applied references. if any one of the elements is not taught in any of the applied prior art, the obviousness rejection under §103 cannot stand.

Applicant would like to explain why the amended claims are patentable over Jingan in view of Surbey and Kuwata, as matter of the fact, the combined Jingan, Surbey and Kuwata habe failed to suggest or failed to disclose several key limitations of instant application.

For example, all of Jingan, Surbey and Kuwata have failed to either implicitly or explicitly disclose or suggest the following limitation of the claim 1, 24 and 31:

The server is operable with the wireless device to allow a user from the wireless device to "download a file from a remote web server directly into the storage space" allocated to the wireless device." ;

For the above reason alone, the claims 1, 24, and 31 are patentable over the combination of the Jingan, Surbey and Kuwata. Therefore, a request for withdrawing the 35 USC 103 (a) rejections over the amended claims and a request for allowance of the amended claims of 1, 24 and 31 are respectively submitted.

Since all of independent claims are patentable over the Jingan, Surbey and Kuwata, thus all dependent claims of the independent claims are also patentable as matter of the law.

2: Summary:

Applicant invites Examiner to review the remarks made above for further reconsideration of the allowance of the amended claims.

Applicant also appreciates the Office Action for carefully examining instant application and if a telephone conference would facilitate the advance the examination of this application, the applicant Sheng Tai (Ted) Tsao can be reached at (408) 813-0536 and at 510-580-8592. Please also forward the corresponding materials to inventor's address of 3906 Borgo Common, Fremont, CA 94538.

Respectfully submitted,
Date: 09/04/2014

/Shengtai tsao/

Sheng Tai (Ted) Tsao
3906 Borgo Common,
Fremont, CA 94538
408-813-0536
510-580-8592

Electronic Acknowledgement Receipt

EFS ID:	20092011
Application Number:	14079831
International Application Number:	
Confirmation Number:	9132
Title of Invention:	System And Method For Support Wireless Device Access To External Storage
First Named Inventor/Applicant Name:	Sheng Tai Tsao
Customer Number:	77501
Filer:	Sheng Tai Tsao
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	09-SEP-2014
Filing Date:	14-NOV-2013
Time Stamp:	18:31:24
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	831claims.pdf	66289 <small>4361b835cf6f0439667d7b5fefccdac01936a65d</small>	no	7

Warnings:

Information:

2	Applicant Arguments/Remarks Made in an Amendment	831-Remark.pdf	39682 44aaee9fc5a8ef446f50017356d09af03d11b6	no	2
Warnings:					
Information:					
Total Files Size (in bytes):				105971	
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed	PTO/SB/25 PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce
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Electronic Petition Request	TERMINAL DISCLAIMER TO OBTAIN A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION AND TERMINAL DISCLAIMER TO OBTAIN A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT
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Application Number	14079831
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Filing Date	14-Nov-2013
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First Named Inventor	Sheng Tsao
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Attorney Docket Number	
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Title of Invention	System And Method For Support Wireless Device Access To External Storage
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- Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action
- This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
Sheng Tai (Ted) Tsao	100 %

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

14153052 filed on 01/12/2014

as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

8606880

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

- Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.
- I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicants claims the following fee status:

- Small Entity
- Micro Entity
- Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

- An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application
- Registration Number _____
- A sole inventor
- A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application
- A joint inventor; all of whom are signing this request

Signature	/shengtai tsao/
Name	Sheng Tai (Ted) Tsao

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	14079831			
Filing Date:	14-Nov-2013			
Title of Invention:	System And Method For Support Wireless Device Access To External Storage			
First Named Inventor/Applicant Name:	Sheng Tai Tsao			
Filer:	Sheng Tai Tsao			
Attorney Docket Number:				
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Statutory or Terminal Disclaimer	1814	1	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				160

Doc Code: DISQ.E.FILE

Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 14079831

Filing Date: 14-Nov-2013

Applicant/Patent under Reexamination: Tsao et al.

Electronic Terminal Disclaimer filed on September 9, 2014

APPROVED

This patent is subject to a terminal disclaimer

DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	20092084
Application Number:	14079831
International Application Number:	
Confirmation Number:	9132
Title of Invention:	System And Method For Support Wireless Device Access To External Storage
First Named Inventor/Applicant Name:	Sheng Tai Tsao
Customer Number:	77501
Filer:	Sheng Tai Tsao
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	09-SEP-2014
Filing Date:	14-NOV-2013
Time Stamp:	18:39:42
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$160
RAM confirmation Number	2908
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Electronic Terminal Disclaimer-Filed	eTerminal-Disclaimer.pdf	35821	no	3
			66eb4fc2d20c237afee4eae1c6121adb22e b0a3		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	29595	no	2
			eb3f4e250a01a0377d879482379dd145e29 991e5		
Warnings:					
Information:					
Total Files Size (in bytes):				65416	
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875			Application or Docket Number 14/079,831	Filing Date 11/14/2013	<input type="checkbox"/> To be Mailed
ENTITY: <input type="checkbox"/> LARGE <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> MICRO					
APPLICATION AS FILED – PART I					
(Column 1)		(Column 2)			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A		
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A		
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A		
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$	=	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$	=	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	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).				
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>					
* 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	09/09/2014	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X \$40 =	0	
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X \$210 =	0	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))							
	<input type="checkbox"/> 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 \$	=	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$	=	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))							
	<input type="checkbox"/> 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 /CORALIA BETANCOURT/		
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".								
*** 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.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

14/079,831 11/14/2013 Sheng Tai Tsao 9132

77501 7590 08/29/2014
Sheng Tai (Ted) Tsao
3906 Borgo Common.
Fremont, CA 94538

Table with 1 column: EXAMINER

SALL, EL-HADJI MALICK

Table with 2 columns: ART UNIT, PAPER NUMBER

2457

Table with 2 columns: NOTIFICATION DATE, DELIVERY MODE

08/29/2014 ELECTRONIC

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

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

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

ted.tsao@sttwebos.com
ted.tsao@yahoo.com
ted.tsao@comcast.net

Office Action Summary	Application No. 14/079,831	Applicant(s) TSAO ET AL.	
	Examiner EL HADJI SALL	Art Unit 2457	AIA (First Inventor to File) Status No

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on November 14, 2013.
 A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) 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.
- 4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) Claim(s) 1-29 is/are pending in the application.
5a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 6) Claim(s) _____ is/are allowed.
- 7) Claim(s) 11-29 is/are rejected.
- 8) Claim(s) _____ is/are objected to.
- 9) Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, 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.

Application Papers

- 10) The specification is objected to by the Examiner.
- 11) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) 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)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date _____.
- 3) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 4) Other: _____.

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

DETAILED ACTION

- 1.** This action is in response to the application filed on November 14, 2013.

Claims 1-10 are canceled. Claims 11-29 represent SYSTEM AND METHOD FOR SUPPORT WIRELESS DEVICE ACCESS TO EXTERNAL STORAGE.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 2.** Claims 11-29 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Jhingan et al. U.S. 20020133597 in view of Surbey et al. U.S. 20040186750, further in view of Kuwata et al. U.S. 20030072031.

Jhingan teaches the invention substantially as claimed including global storage system (see abstract).

As to claims 11, 19 and 24, Jhingan teaches a server providing storage space to wireless device, the server comprising:

at least one storage device configured with at least one storage space (paragraph 55); and

a storage medium comprising program code that, when executed by the server, causes the server to:

allocate the storage space of a predefined capacity to be accessible to the wireless device (paragraphs 55 and 43).

Jhingan fails to explicitly teach create a folder structure residing in the storage space, establish a link for the wireless device access to the folder structure in the storage space, and update the folder structure whenever a user from the wireless device to performs an operation to the folder structure in the storage space.

However, Surbey teaches method and system for automaticating insurance processes. Surbey teaches create a folder structure residing in the storage space (abstract), establish a link for access to the folder structure in the storage space (paragraph 127).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Jhingan in view of Surbey to provide create a folder structure residing in the storage space, establish a link for the wireless device access to the folder structure in the storage space for the purpose of ensuring that all of the documents and messages associated with a particular transaction can always be re-constituted by finding and opening a specific standard sub-folder.

Jhingan and Surbey teaches substantial features of the claimed invention but fail to explicitly teach update the folder structure whenever a user from the wireless device to performs an operation to the folder structure in the storage space.

However, Kuwata teaches electronic document assembly, proofing and printing system. Kuwata teaches update the folder structure whenever a user from the wireless device to performs an operation to the folder structure in the storage space (paragraph 62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Jhingan and Surbey in view of Kuwata to provide update the folder structure whenever a user from the wireless device to performs an operation to the folder structure in the storage space for the purpose of providing a shared system allowing users to manipulate documents on a server by suing a web browser.

As to claims 12, Jhingan, Surbey and Kuwata teach the server as recited in claim 11, wherein the server update the folder structure in response to a request, received from the wireless device, for creating a folder in the folder structure (paragraph 62 of Kuwata).

As to claim 13, Jhingan, Surbey and Kuwata teach the server as recited in claim 12, wherein the server updates the folder structure in response to a request, received from the wireless device, for access to the folder in the folder structure for storing data

therein or retrieving data therefrom, wherein the data is a file or a message (paragraph 62 of Kuwata).

As to claim 14, Jhingan, Surbey and Kuwata teach the server as recited in claim 11, wherein the server update the folder structure in response to a request, received from the wireless device, for deleting or moving or copying or renaming a file or a folder being stored in the folder structure (paragraph 62 of Jhingan).

As to claim 15, Jhingan, Surbey and Kuwata teach server as recited in claim 11, wherein the server update the folder structure in response to an operation performed by the user of the wireless device to download a file from a remote web server directly into the storage space (paragraph 62 of Jhingan).

As to claim 16, Jhingan, Surbey and Kuwata teach the server as recited in claim 11, wherein the folder structure is created with multiple folders on a file system configured in the storage space accessible to the wireless devices (paragraph 69 of Jhingan).

As to claim 17, Jhingan, Surbey and Kuwata teach the server as recited in claim 14, wherein the user of the wireless device is allowed via a web browser executed thereof to perform said operation to the folder structure in the storage space (paragraph 28 of Jhingan).

As to claim 18, Jhingan, Surbey and Kuwata teach the server as recited in claim 11, wherein the link is wireless (paragraph 43 of Jhingan).

As to claim 20, Jhingan, Surbey and Kuwata teach the method as recited in claim 19, wherein the remote web server is accessible through the world wide web and comprises at least one downloadable file (paragraph 5 of Jhingan).

As to claim 21, Jhingan, Surbey and Kuwata teach the method as recited in claim 19, wherein the storage space is configured with a file system (paragraph 41 of Jhingan).

As to claim 22, Jhingan, Surbey and Kuwata teach the method as recited in claim 19, wherein the wireless device is operable with the storage server to allow a user via a web browser executed thereof to request download a file from a remote web server into the storage space directly (paragraph 62 of Jhingan).

As to claim 23, Jhingan, Surbey and Kuwata teach the method as recited in claim 19, wherein the wireless device is configured via a wireless link access to the storage space residing in the storage server (paragraph 43 of Jhingan).

As to claim 25, Jhingan, Surbey and Kuwata teach the server as recited in the claim 24, wherein said downloading a file from a remote web server comprises:

obtaining, by the wireless device, download information for the file from the remote web server; transmitting the download information cached in the wireless device to the server (paragraph 37); and

causing the server in accordance with the downloading information to download the file from the remote web server directly into the storage space allocated to the wireless device (paragraph 39).

As to claim 26, Jhingan, Surbey and Kuwata teach the server as recited in claim 24, wherein the wireless device has a function of making or receiving a phone call (paragraph 43 of Jhingan).

As to claim 27, Jhingan, Surbey and Kuwata teach the server as recited in claim 24, wherein the storage space is configured with a file system (paragraph 41 of Jhingan).

As to claim 28, Jhingan, Surbey and Kuwata teach the server as recited in claim 24, wherein the remote web server is accessible through the world wide web and comprises at least one downloadable file (paragraph 39 of Jhingan).

As to claim 29, Jhingan, Surbey and Kuwata teach the server as recited in claim 24, wherein the link is wireless (paragraph 43 of Jhingan).

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to El Hadji M Sall whose telephone number is 571-272-4010. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. 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).

/EL HADJI SALL/

Primary Examiner, Art Unit 2457

Application/Control Number: 14/079,831
Art Unit: 2457

Page 9

Notice of References Cited	Application/Control No. 14/079,831	Applicant(s)/Patent Under Reexamination TSAO ET AL.	
	Examiner EL HADJI SALL	Art Unit 2457	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-2002/0133597 A1	09-2002	Jhingan et al.	709/228
*	B US-2004/0186750 A1	09-2004	Surbey et al.	705/004
*	C US-2003/0072031 A1	04-2003	Kuwata et al.	358/1.15
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			


FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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


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

Index of Claims 	Application/Control No. 14079831	Applicant(s)/Patent Under Reexamination TSAO ET AL.
	Examiner EL HADJI SALL	Art Unit 2457

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

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

CLAIM		DATE									
Final	Original	08/24/2014									
	1	-									
	2	-									
	3	-									
	4	-									
	5	-									
	6	-									
	7	-									
	8	-									
	9	-									
	10	-									
	11	✓									
	12	✓									
	13	✓									
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	15	✓									
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	25	✓									
	26	✓									
	27	✓									
	28	✓									
	29	✓									

Search Notes 	Application/Control No. 14079831	Applicant(s)/Patent Under Reexamination TSAO ET AL.
	Examiner EL HADJI SALL	Art Unit 2457

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
709	219,203,226,220,200.	8/24/2014	ES
455	412.1,899.	8/24/2014	ES

SEARCH NOTES		
Search Notes	Date	Examiner
Continuity Search	8/24/2014	ES
Inventor Search	8/24/2014	ES
Non Patent Litterature Search	8/24/2014	ES
East Search	8/24/2014	ES
CPC Search	8/24/2014	ES

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

	/EL HADJI SALL/ Primary Examiner.Art Unit 2457
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BIB DATA SHEET

CONFIRMATION NO. 9132

SERIAL NUMBER 14/079,831	FILING or 371(c) DATE 11/14/2013 RULE	CLASS 709	GROUP ART UNIT 2457	ATTORNEY DOCKET NO.	
APPLICANTS Sheng Tai (Ted) Tsao, Fremont, CA, Assignee (with 37 CFR 1.172 Interest); INVENTORS Sheng Tai Tsao, Fremont, CA; ** CONTINUING DATA ***** This application is a CON of 10/726,897 12/04/2003 PAT 8606880 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY ** 11/25/2013					
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and /EL HADJI MALICK Acknowledged SALL/ Examiner's Signature	<input type="checkbox"/> Met after Allowance ES Initials	STATE OR COUNTRY CA	SHEETS DRAWINGS 4	TOTAL CLAIMS 19	INDEPENDENT CLAIMS 3
ADDRESS Sheng Tai (Ted) Tsao 3906 Borgo Common. Fremont, CA 94538 UNITED STATES					
TITLE System And Method For Support Wireless Device Access To External Storage					
FILING FEE RECEIVED 730	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	83745	server same wireless near3 (device terminal)	US-PGPUB; USPAT	OR	ON	2014/08/24 14:18
L2	6904	(assign\$5 allocat\$5) near3 storage near space	US-PGPUB; USPAT	OR	ON	2014/08/24 14:18
L3	110	L1 and L2	USPAT	OR	OFF	2014/08/24 14:18
L4	2	L1 same L2	USPAT	OR	OFF	2014/08/24 14:19
L5	5	L1 same L2	US-PGPUB; USPAT	OR	ON	2014/08/24 14:19
L6	0	5 and @ad<"20031204"	US-PGPUB; USPAT	OR	ON	2014/08/24 14:20
L7	0	((assign\$5 allocat\$5) near3 storage near space) and wireless and server).ab.	US-PGPUB; USPAT	OR	ON	2014/08/24 14:22
L8	1	((assign\$5 allocat\$5) near3 space) and wireless and server).ab.	US-PGPUB; USPAT	OR	ON	2014/08/24 14:22
L9	505	((assign\$5 allocat\$5) and wireless and server).ab.	US-PGPUB; USPAT	OR	ON	2014/08/24 14:23
L10	315	L1 and L2	US-PGPUB; USPAT	OR	ON	2014/08/24 14:23
L11	0	9 and 10	US-PGPUB; USPAT	OR	ON	2014/08/24 14:23
L12	32	((assign\$5 allocat\$5) near3 space) and server and device).ab.	US-PGPUB; USPAT	OR	ON	2014/08/24 14:24
L13	55886	(assign\$5 allocat\$5) near3 space	US-PGPUB; USPAT	OR	ON	2014/08/24 14:25
L14	32	12 and 13	US-PGPUB; USPAT	OR	ON	2014/08/24 14:26
L15	15	14 and @ad<"20031204"	US-PGPUB; USPAT	OR	ON	2014/08/24 14:26
L16	4	15 and wireless	US-PGPUB; USPAT	OR	ON	2014/08/24 14:26
L17	121	folder near3 storage near space	US-	OR	ON	2014/08/24

			PGPUB; USPAT			14:32
L18	4	creat\$5 near folder near3 storage near space	US- PGPUB; USPAT	OR	ON	2014/08/24 14:32
L19	0	18 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 14:33
L20	25	17 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 14:33
L21	5	20 and creat\$5 near folder	US- PGPUB; USPAT	OR	ON	2014/08/24 14:33
L22	6	creat\$5 near3 structured near folder	US- PGPUB; USPAT	OR	ON	2014/08/24 14:51
L23	0	22 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 14:51
L24	117	structured near folder	US- PGPUB; USPAT	OR	ON	2014/08/24 14:56
L25	0	creat\$5 near3 foler near structur\$5	US- PGPUB; USPAT	OR	ON	2014/08/24 14:57
L26	0	creat\$5 near3 fodler near structur\$5	US- PGPUB; USPAT	OR	ON	2014/08/24 14:57
L27	346	creat\$5 near3 folder near structur\$5	US- PGPUB; USPAT	OR	ON	2014/08/24 14:57
L28	71	updat\$5 near3 folder near structur\$5	US- PGPUB; USPAT	OR	ON	2014/08/24 15:10
L29	13	27 and 28	US- PGPUB; USPAT	OR	ON	2014/08/24 15:10
L30	0	29 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 15:10
L31	83	27 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 15:11
L32	10	28 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 15:11
L33	6	server near3 space near3 wireless near device	US- PGPUB; USPAT	OR	ON	2014/08/24 15:14
L34	0	33 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 15:14
L35	40	server near3 space near3 wireless	US- PGPUB; USPAT	OR	ON	2014/08/24 15:14
L36	3	35 and @ad<"20031204"	US-	OR	ON	2014/08/24

			PGPUB; USPAT			15:14
L37	23	31 and wireless	US- PGPUB; USPAT	OR	ON	2014/08/24 15:19
L38	18	(creat\$5 near3 folder near structur\$5).ab.	US- PGPUB; USPAT	OR	ON	2014/08/24 15:24
L39	1	37 and 38	US- PGPUB; USPAT	OR	ON	2014/08/24 15:25
L40	227	(store storage space memory) near3 (allocat\$5 provid\$5 assign\$5) near3 wireless near device	US- PGPUB; USPAT	OR	ON	2014/08/24 15:30
L41	257	((store storage space memory) and (allocat\$5 provid\$5 assign\$5) and wireless near device).ab.	US- PGPUB; USPAT	OR	ON	2014/08/24 15:31
L42	16	40 and 41	US- PGPUB; USPAT	OR	ON	2014/08/24 15:32
L43	3	42 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 15:32
L44	47	(allocat\$5 assign\$5 provid\$5) near3 space near3 wireless near device	US- PGPUB; USPAT	OR	ON	2014/08/24 15:37
L45	13	44 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 15:37
L46	11	provid\$5 near3 space near3 wireless near device	US- PGPUB; USPAT	OR	ON	2014/08/24 17:28
L47	0	46 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 17:28
L48	650	space near3 wireless near device	US- PGPUB; USPAT	OR	ON	2014/08/24 17:29
L49	73	48 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 17:29
L50	33	48 same server	US- PGPUB; USPAT	OR	ON	2014/08/24 17:29
L51	10	50 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 17:29
L52	14	("20020059621" "20020123336" "20020128036" "20020133597" "20030191716" "6351776" "6356941" "6714968" "6735623" "6839743" "6985927" "7506034" "7650621" "7894803").PN. OR ("8606880").URPN.	US- PGPUB; USPAT; USOCR	OR	OFF	2014/08/24 17:57
L53	14	52 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 17:57
L54	9	53 and wireless	US-	OR	ON	2014/08/24

			PGPUB; USPAT			17:58
L55	2793	space near3 (wireless mobile) near device	US- PGPUB; USPAT	OR	ON	2014/08/24 17:59
L56	1	27 and 55	US- PGPUB; USPAT	OR	ON	2014/08/24 18:00
L57	743	storage near servers same (portable wireless) near device	US- PGPUB; USPAT	OR	ON	2014/08/24 18:01
L58	4	27 and 57	US- PGPUB; USPAT	OR	ON	2014/08/24 18:02
L59	67	57 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 18:03
L60	176	storage near servers same (portable wireless) near devices	US- PGPUB; USPAT	OR	OFF	2014/08/24 18:03
L61	19	60 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 18:03
L62	19	61 and 57	US- PGPUB; USPAT	OR	ON	2014/08/24 18:03
L63	7	53 and storage and (portable wireless) near3 (network device)	US- PGPUB; USPAT	OR	ON	2014/08/24 18:08
L64	8	53 and storage near space	US- PGPUB; USPAT	OR	ON	2014/08/24 18:58
L66	1	"20140089360"	US- PGPUB; USPAT	OR	ON	2014/08/24 19:04
L67	10	28 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 20:26
L68	6	updat\$5 near3 folder near structur\$5 near6 request\$5	US- PGPUB; USPAT	OR	ON	2014/08/24 20:43
L69	0	68 and @ad<"20031204"	US- PGPUB; USPAT	OR	ON	2014/08/24 20:43
S1	1	"8606880".pn.	US- PGPUB; USPAT	OR	ON	2014/08/24 11:28
S2	53858	709/219,203,226,220,200.ccls. 455/412.1,899.ccls.	US- PGPUB; USPAT	OR	ON	2014/08/24 11:30
S3	148306	(H04L 49/9005)	US- PGPUB; USPAT	OR	ON	2014/08/24 12:50
S4	53858	709/219,203,226,220,200.ccls. 455/412.1,899.ccls.	US- PGPUB; USPAT	OR	ON	2014/08/24 12:50
S5	196607	S4 S3	US-	OR	ON	2014/08/24

EAST Search History

			PGPUB; USPAT			12:50
S6	83745	server same wireless near3 (device terminal)	US- PGPUB; USPAT	OR	ON	2014/08/24 12:51
S7	6904	(assign\$5 allocat\$5) near3 storage near space	US- PGPUB; USPAT	OR	ON	2014/08/24 12:52

8/ 24/ 2014 10:25:54 PM

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Sheng Tai (Ted) Tsao, et al.
APPLICATION No.: 14/079,831 Confirmation No. 9132
FILING DATE: 11/14/2013
TITLE: The System And Method For Support Wireless Device Access to
External Storage
EXAMINER: Abel Jalil Neveen
ART UNIT: 2165

Mail Stop **Amendment**
COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

Preliminary Amendment for the application 14/079,831

Dear Commissioner:

This communication directs to preliminary amendment for the claims submitted on the filing date. There is no new claims being added, therefore, there is no fee due.

Thanks helps from the USPTO to enter the amended claims of instant application.

Respectively Submitted.

08/20/2014

/Shanegtai Tsao/
Sheng Tai (Ted) Tsao
2979 Heidi Drive,
San Jose, CA 95132
408-813-0536 or 510-580-8592

AMENDMENT IN THE CLAIMS:

1 – 10 (*Canceled*)

11. (*Previously Presented*) A server providing storage space to wireless device, the server comprising:

at least one storage device configured with at least one storage space; and
a storage medium comprising program code that, when executed by the server, causes the server to:

allocate the storage space of a predefined capacity to be accessible to the wireless device, create a folder structure residing in the storage space;

establish a link for the wireless device access to the folder structure in the storage space; and

update the folder structure whenever a user from the wireless device to performs an operation to the folder structure in the storage space.

12. (*Currently Amended*) The server as recited in claim 11, wherein the ~~updating of the folder structure comprises:~~ server updates updating the folder structure in response to a request, received from the wireless device, for creating a folder in the folder structure.

13. (*Currently Amended*) The server as recited in claim 12, , wherein the server updates ~~updating of the folder structure comprises:~~ updating the folder structure in response to a request, received from the wireless device, for access to the folder in the folder structure for storing data therein or retrieving data therefrom, wherein the data is a file or a message.

14. (*Currently Amended*) The server as recited in claim ~~11-13,~~ wherein the server updates ~~updating of the folder structure comprises:~~ updating the folder structure in response to a request, received from the wireless device, for deleting or moving or copying or renaming a file or a folder being stored in the folder structure.

15. (*Currently Amended*) The server as recited in claim ~~1112~~, wherein the ~~server updates~~ updating of the folder structure comprises: updating the folder structure in response to an operation performed by the user a request, received from of the wireless device for storing to download a file to be downloaded from a remote web server directly into the storage space instead of downloading the file into the wireless device itself.
16. (*Currently Amended*) The server as recited in claim ~~1112~~, wherein the folder structure is created with multiple folders on a file system configured in the storage space accessible to the wireless devices.
17. (*Currently Amended*) The server as recited in claim ~~1412~~, wherein the user of the wireless device is allowed via a web browser executed thereof to perform said operation to the folder structure in the storage space.
18. (*Currently Amended*) The server as recited in claim ~~1112~~, wherein the link ~~is~~ includes wireless communication media.
19. (*Previously Presented*) A method for a wireless device downloading file comprising:
obtaining, by the wireless device, download information for a file from a remote web server;
transmitting the download information cached in the wireless device to a storage server; and
causing the storage server in accordance with the downloading information to download the file from the remote web server directly into a storage space configured in the storage server.
20. (*Previously Presented*) The method as recited in claim 19, wherein the remote web server is accessible through the world wide web and comprises at least one downloadable file.

21. (*Currently Amended*) The method as recited in claim 19, wherein the storage space is configured ~~in a storage device residing in the storage server and comprises with a file system.~~
22. (*Currently Amended*) The method as recited in claim 19, wherein the wireless device is operable with the storage server to allow a user via a web browser executed ~~thereof on the wireless device to request download the a file from a the~~ remote web server into the storage space directly ~~instead of downloading the file into the wireless device itself.~~
23. (*Currently Amended*) The method as recited in claim 19, wherein the wireless device is configured via a wireless link access to the storage space residing in the storage server.
24. (*Currently Amended*) A ~~server system~~ supporting a wireless device downloading file, the ~~system server~~ comprising:
at least one storage ~~device~~server and
one ~~network interface~~; wherein ~~wireless device~~, the storage ~~device server~~ is configured with at least one storage space of a predefined capacity allocated to allow the wireless device via a link remotely access to the storage space, and wherein the wireless device is configured operable with the server to allow a user via a web browser executed on the wireless device thereof to download a file from a remote web server directly into the allocated storage space ~~in the storage server~~ instead of downloading the file into the wireless device itself.
25. (*Currently Amended*) The ~~server system~~ as recited in the claim 24, wherein said downloading a file from a remote web server comprises:
obtaining, by the wireless device, download information for the file from the remote web server;
transmitting the download information cached in the wireless device to the storage server; and

causing the ~~storage server~~ in accordance with the downloading information to download the file from the remote web server directly into the storage space allocated to the wireless device.

26. (*Currently Amended*) The ~~server system~~ as recited in claim 24, wherein the wireless device has a function of making or receiving a phone call.

27. (*Currently Amended*) The ~~server system~~ as recited in claim 24, wherein the storage space is configured ~~in a storage device residing in the storage server and comprises~~ with a file system.

28. (*Currently Amended*) The ~~server system~~ as recited in claim 24, wherein the remote web server is accessible through the world wide web and comprises at least one downloadable file.

29. (*Currently Amended*) The ~~server system~~ as recited in claim 24, wherein the link ~~includes is~~ wireless communication media.

Electronic Acknowledgement Receipt

EFS ID:	19913110
Application Number:	14079831
International Application Number:	
Confirmation Number:	9132
Title of Invention:	System And Method For Support Wireless Device Access To External Storage
First Named Inventor/Applicant Name:	Sheng Tai Tsao
Customer Number:	77501
Filer:	Sheng Tai Tsao
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	20-AUG-2014
Filing Date:	14-NOV-2013
Time Stamp:	12:41:31
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	Preliminary Amendment	831claims.pdf	47666 a96b0d0d956dd3acc78e23c6dc55c0888a20ccda	no	5

Warnings:

Information:

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.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 14/079,831	Filing Date 11/14/2013	<input type="checkbox"/> To be Mailed	
ENTITY: <input type="checkbox"/> LARGE <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> MICRO							
APPLICATION AS FILED – PART I							
(Column 1)		(Column 2)					
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)			
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A				
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>	N/A	N/A	N/A				
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A				
TOTAL CLAIMS <small>(37 CFR 1.16(j))</small>	minus 20 =	*	X \$	=			
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$	=			
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	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).						
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>							
* 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	08/20/2014	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 \$40 = 0	
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	X \$210 = 0	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						
	<input type="checkbox"/> 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 \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						
	<input type="checkbox"/> 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. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** 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.							

LIE
/SANDRA GARNETT/

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.



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United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

14/079,831 11/14/2013 Sheng Tai Tsao 9132

77501 7590 06/18/2014
Sheng Tai (Ted) Tsao
3906 Borgo Common.
Fremont, CA 94538

Table with 1 column: EXAMINER

ABEL JALIL, NEVEEN

Table with 2 columns: ART UNIT, PAPER NUMBER

2165

Table with 2 columns: NOTIFICATION DATE, DELIVERY MODE

06/18/2014 ELECTRONIC

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

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

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

ted.tsao@sttwebos.com
ted.tsao@yahoo.com
ted.tsao@comcast.net



UNITED STATES DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
14/079,831	14 November, 2013	TSAO ET AL.	

Sheng Tai (Ted) Tsao 3906 Borgo Common. Fremont, CA 94538	EXAMINER	
	ANTHONY LOVER	
	ART UNIT	PAPER
	OPIM	20140613

DATE MAILED:

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

Commissioner for Patents

Attached is a communication to applicant explaining that the instant application is being identified as a pre-AIA application despite applicant's statement under 37 CFR 1.55 or 1.78 made in the instant application, either on the Application Data Sheet (ADS) or in an otherwise filed paper.

**Application Identified as a Pre-AIA Application
Despite the 37 CFR 1.55 or 1.78 Statement of Record**

The statement under 37 CFR 1.55 or 1.78 (“the 1.55/1.78 statement”) and the domestic benefit/national stage information in this application conflict as to whether this application is to be examined under the AIA (First Inventor to File) or pre-AIA (First to Invent) law.

This application, with a filing date on or after March 16, 2013, contains the 1.55/1.78 statement indicating that this application should be examined under the AIA (First Inventor to File). This statement was either (1) on the Application Data Sheet (ADS) by virtue of the 1.55/1.78 statement for AIA (First Inventor to File) Transition Applications check box being selected or (2) in an otherwise filed paper. The 1.55/1.78 statement provided:

This application * * * contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

However, this application is separately identified in the Domestic Benefit/National Stage Information section of the ADS as a continuation (CON) or divisional (DIV) of an application filed before March 16, 2013, indicating that this application should be examined under pre-AIA (First to Invent) law because it does not contain, or did not contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. DUE TO THIS APPLICATION BEING IDENTIFIED AS A CONTINUATION OR DIVISIONAL OF AN APPLICATION FILED BEFORE MARCH 16, 2013, THIS APPLICATION IS BEING IDENTIFIED AS A PRE-AIA (FIRST TO INVENT) APPLICATION DESPITE THE 1.55/1.78 STATEMENT OF RECORD.

Accordingly, this application is/will be examined under pre-AIA (First to Invent) law; all forthcoming Office actions on the merits will be labeled “**AIA (First Inventor to File) Status: No**” (see upper right box on form PTOL-37/37D and/or PTOL-326/326AE).

Moreover, if applicant has received any Office action on the merits, which identified the instant application as “**AIA (First Inventor to File) Status: Yes,**” said Status information was in error and is hereby corrected to “**No**” to indicate that that the present application is a pre-AIA (First to Invent) application.

NO RESPONSE TO THIS COMMUNICATION IS REQUIRED UNLESS APPLICANT BELIEVES THAT THE APPLICATION CONTAINS, OR EVER CONTAINED A CLAIM TO A CLAIMED INVENTION HAVING AN EFFECTIVE FILING DATE ON OR AFTER MARCH 16, 2013 AND IS AN AIA (FIRST INVENTOR TO FILE) APPLICATION.

If applicant believes that the application is an AIA (First Inventor to File) application, applicant must file a corrected ADS (with appropriate markings as set forth in 37 CFR 1.76(c)(2)) identifying the instant application as a **continuation-in-part (CIP)** application in the Domestic Benefit/National Stage Information section of the ADS and request in writing that the application

be examined under the AIA (First Inventor to File) because the identification of the application as a CON/DIV application on filing was an error. IN THIS SITUATION, APPLICANT'S RESPONSE IS DUE WITHIN TWO MONTHS OF THE MAILING DATE OF THIS COMMUNICATION; THE RESPONSE PERIOD IS NOT EXTENDABLE UNDER 37 CFR 1.136.

Questions regarding this communication may be directed to a TC AIA Specialist as appropriate.

Technology Center	TC AIA Specialist	Contact Information
1600, 1700, 2900	Kathleen Bragdon	(571) 272-0931
2100, 2400	Christopher Grant	(571) 272-7294
2600, 2800	Cassandra Spyrou	(571) 272-1624
3600, 3700	Tom Hughes	(571) 272-4357



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Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 4 columns: APPLICATION NUMBER (14/079,831), FILING OR 371(C) DATE (11/14/2013), FIRST NAMED APPLICANT (Sheng Tai Tsao), ATTY. DOCKET NO./TITLE

77501
Sheng Tai (Ted) Tsao
3906 Borgo Common.
Fremont, CA 94538

CONFIRMATION NO. 9132
PUBLICATION NOTICE



Title: System And Method For Support Wireless Device Access To External Storage

Publication No. US-2014-0089360-A1

Publication Date: 03/27/2014

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
14/079,831

APPLICATION AS FILED - PART I

(Column 1)		(Column 2)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (j), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	19 minus 20 = *	*	x 40 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x 210 =	0.00			
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).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	730		TOTAL	

APPLICATION AS AMENDED - PART II

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

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** 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 found in the appropriate box in column 1.



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Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY. DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 14/079,831, 11/14/2013, 3715, 730, , 19, 3

CONFIRMATION NO. 9132

UPDATED FILING RECEIPT



77501
Sheng Tai (Ted) Tsao
3906 Borgo Common.
Fremont, CA 94538

Date Mailed: 12/20/2013

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Inventor(s) Sheng Tai Tsao, Fremont, CA;
Applicant(s) Sheng Tai (Ted) Tsao, Fremont, CA
Assignment For Published Patent Application Sheng Tai (Ted) Tsao, Fremont, CA

Power of Attorney: None
Domestic Priority data as claimed by applicant This application is a CON of 10/726,897 12/04/2003 PAT 8606880

Foreign Applications for which priority is claimed (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.) - None. Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access - A proper Authorization to Permit Access to Application by Participating Offices (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 11/25/2013
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 14/079,831
Projected Publication Date: 03/27/2014
Non-Publication Request: No
Early Publication Request: No

**** SMALL ENTITY ****

Title

System And Method For Support Wireless Device Access To External Storage

Preliminary Class

434

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: Yes

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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www.uspto.gov

APPLICATION NUMBER	FILING OR 37(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/079,831	11/14/2013	Sheng Tai Tsao	

77501
Sheng Tai (Ted) Tsao
3906 Borgo Common
Fremont, CA 94538

CONFIRMATION NO. 9132
FORMALITIES LETTER



0000000065212819

Date Mailed: 11/29/2013

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.138(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, is required. The substitute specification must be submitted with markings and be accompanied by a clean version (without markings) as set forth in 37 CFR 1.125(c) and a statement that the substitute specification contains no new matter (see 37 CFR 1.125(b)). The specification, claims, and/or abstract page(s) submitted is not acceptable and cannot be scanned or properly stored because:
 - The line spacing on the specification, claims, and/or abstract is not 1½ or double spaced (see 37 CFR 1.52(b)).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Electronic Acknowledgement Receipt

EFS ID:	17599902
Application Number:	14079831
International Application Number:	
Confirmation Number:	9132
Title of Invention:	System And Method For Support Wireless Device Access To External Storage
First Named Inventor/Applicant Name:	Sheng Tai Tsao
Customer Number:	77501
Filer:	Sheng Tai Tsao
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	09-DEC-2013
Filing Date:	14-NOV-2013
Time Stamp:	12:28:35
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	Specification	831spec-markup.pdf	105182 a8f87e724d473d9bf2d9eaa92950d57331e2df01	no	13

Warnings:

Information:

2	Specification	831spec-clean.pdf	64577 77c451e49da5533e6429560f32548d3a8a2d31d4	no	9
Warnings:					
Information:					
3	Drawings-only black and white line drawings	831draw_annotated.pdf	49588 317c4ec5334230c226342fc7f7d0f45a2e3970b7	no	1
Warnings:					
Information:					
4	Drawings-only black and white line drawings	831draw_replacement.pdf	68406 0ae59f113bfa62cf7300abc1a4e9825e60876e	no	4
Warnings:					
Information:					
5	Miscellaneous Incoming Letter	831-Notice.PDF	792440 0348d3f5a459637d789bc2395f25cccae415419f	no	1
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<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> 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.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> 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.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> 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.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Sheng Tai (Ted) Tsao, et al.
SERIAL NO.: 14/079,831 Confirmation No. 9132
FILING DATE: 11/14/2013
TITLE: The Use of Wireless Devices' External Storage
EXAMINER: Sall, El Hadji Malick
ART UNIT: 3715

Mail Stop Missing Parts
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Response To Notice to File Corrected Application Paper

Dear Commissioner:

This communication responds to a Notice to File Corrected Paper mailed on 11/29/2013 for the above-identified application. The Notice sets forth a two month period, or the time remaining from the Notice of Allowance and Fee(s) due, whichever is longer, to respond. Accordingly, this response is timely filed before the 01/29/2014.

In this response, please find followings:

- 1) Amendment to the drawings starting on page 2 of this paper;
- 2) Amendment to the specification starting on page 3 of this paper; and
- 3) A copy of the first page of the Notice.

There is no new matter being introduced in the substitute specification and in the substitute drawings. Therefore, a request for entering the substitute drawings and for entry of the amended specification is also respectively submitted. Upon entry of the amendment, Applicants submit that the application paper has now been corrected. If there is still any issue, Applicant can be reached at the address and phone listed bellow.

Respectively Submitted

12/09/2013

/shengtai tsao/

Sheng Tai (Ted) Tsao
3906 Borgo Common,
Fremont, CA 94538
408-813-0536
510-580-8592

AMENDMENT TO THE DRAWINGS:

Please withdraw the drawings previously submitted on the filing date. A copy of substitute drawings is enclosed that includes:

- 1) an annotated copy of drawings to correct informalities in the drawings based on the drawings submitted on 12/04/2003 is enclosed.
- 2) a replacement copy of the drawings that contains the fix to the informalities in the drawings is enclosed.

There is no new matter being introduced.

AMENDMENT TO THE SPECIFICATION:

Please withdraw the specification previously submitted on the filing date of instant application. A substitute specification is submitted as follow:

- 1) A markup version of the amended specification based on the specification submitted on 12/04/2003 for parent application of 10/726,897 is enclosed. The amended specification starts on page 4 of this paper;
- 2) A clean version of the amended specification is also enclosed.

There is no new matter being introduced.

<<The markup version of the amended specification>>

The Use of System And Method For Wireless Device Access To Devices' External Storage

**By: ~~Sheng (Ted) Tai Tsao~~
11/19/2003**

Field of the Invention

Cross Reference to Prior Application

[001] This invention is a continuation application of the US patent application No. 10/726,897 filed on 12/04/2003, which is relates to is the continuation of the previous invention, a provisional application number 60/401, 238 of "Concurrent Web Based Multi-task Support for Control Management System" filed on 08/06/2002, where the claim 20 item a), b), d), claim 30 item b), and together with claim 36 represent an invention of using storage of a server system as the external storage for wireless devices. This invention focuses on how can a wireless device user actually use external storage. Specially it focus on how can a wireless device to download data to its external storage, which its principle has preliminary described in claim 19) of the previous invention, This application also related to an provisional application number 60/402,626 of "IP Based Distributed Virtual SAN" filed on 08/12/2002. All mentioned prior applications are herein referenced incorporated by reference in their entirety for all purpose, to transmit data in wireless environment.

Field of the Invention

[002] This invention focuses on how a wireless device can actually use external storage provided by a storage server.

Background Information

~~a)~~

[003] Terminology:

The terminologies described in next few sections reflect the scope and are part of present invention.

[004] The Internal Storage of a System:

The storage media such as hard disk drives, memory sticks, memory etc.. is connected to a system directly through bus or a few inches of cable. Therefore, the storage media actually is a component of [[a]] the system in an ~~same~~ enclosure.

[005] The External Storage of a System:

The external storage media is not a component of [[a]] the system in a same enclosure. Therefore, they ~~has~~ have to be connected through a connecting medium (e.g. a ~~longer~~ cable) such as Ethernet cable for IP based storage, Fiber channel cable for fiber channel storage, or such as wireless ~~media~~ medium and etc.. The storage media of an external storage could be magnetic hard disk drives, solid ~~state~~ state disk, optical storage drives, memory card, etc. and could be in any form such as Raid~~[[,]]~~ which usually consists of a group of hard disk drives.

[006] The Storage Partition, its Volumes, and the Corresponding File System:

To effectively use ~~the~~ storage system, ~~the~~ each storage device usually needs to be partitioned into small volumes. After the partition, each of the volumes can be used to establish a file system~~[[s]]~~ on it. To simplify the discussion herein, the term of the storage volume, its corresponding file system, and the term of the partition of [[a]] the storage device are often used without differentiation ~~in this invention.~~

[007] CCDSVM:

It is an abbreviation for a central controlled distributed scalable virtual machine system. The CCDSVM allows a control management station to control a group of systems and provide distributed services to a client system on the ~~[[in]]~~ Internet, the Intranet, and an LAN environment.

[008] ISP & ASP:

The ISP refers to Internet service provider and the ASP refers to application service provider.

b) [009] Figures:

[010] Fig. 1: ~~This~~ illustrates an embodiment of the instant application, the Fig. 1 is the same figure as Fig. 1 of the previous application of the “Concurrent Web Based Multi-task Support for Control Management System” with an exception of ~~renaming~~ replacing a console host as with a wireless device.

[011] Fig. 2: ~~This~~ is the same figure as Fig. 1 of the above except that it shows the a more detailed details of storage system controlled by the a server. In addition, multiple wireless devices are presented for access to the storage system.

[012] Fig. 3: ~~This~~ figure shows the a scheme of a wireless device downloading contents from an ISP/ASP or other web sites to the an external storage of this allocated for the wireless device.

[013] Fig. 4: ~~This~~ is the same figure as similar to the Fig. 1 of the previous application of the “IP Based Distributed Virtual SAN” with exception that each IP storage server provide provides a file system as external storage for each of the wireless devices instead of provide providing IP based virtual SAN service. Also, each host in said Fig. 1 actually is replaced by a wireless device of Fig. 4.

e) Assumptions:

[014] Unless specified, the programming languages[[,]] and the protocols used by each software modules of instant application, and the computing systems used described in this invention are assumed to be the same as described in the mentioned previous patent[[s]] submission applications.

[015] In addition, in the drawing, like elements are designated by like reference numbers. Further, when a list of identical elements is present, only one element will be given the reference number.

[016]

Brief Description of the Invention

[017] Today the wireless users commonly face ~~the~~ a problem of lack of storage capacity configured on their wireless devices such as cell phone or PDA, which are usually limited to 256MB for PDA and much less for cell phone. To effectively solve this problem and let users own multiple gigabytes (GB) of storage for their wireless devices as well as allowing the users to use the GB storage for their multimedia applications, the storage ~~on~~ of a server can be used as the external storage for the wireless devices. This technology has been ~~claimed~~ briefly introduced in the previous ~~two~~ parent patent[[s]] applications ~~submission by~~ the same author.

[018] Now ~~we can~~ let us examine how ~~does~~ the external storage can actually be used by the wireless devices. First, ~~We can~~ let each server unit (e.g. the server 3 of the Fig. 2) partitions its storage system into ~~such way that each~~ volume[[s]] and each of the volumes will have multiple~~[-]~~GB in size. Therefore, each user ~~from a web browser of any~~ of the wireless devices can be ~~exclusively~~ be-assigned and ~~exclusively~~ access a specific storage volume ~~on a server unit~~. For example, if we need to provide each user a 4GB of storage space, then a 160GB disk drive can support 40 users~~[']~~. Therefore, ~~[[A]]~~ a 4096GB storage system on ~~[[a]]~~ the server unit can support a total of 1024 wireless devices for users. Further, any data on the wireless device can be transmitted to an assigned storage volumes ~~on a server unit~~. In addition, the user ~~on~~ of the wireless device also can download the multimedia data from ~~any~~ an ISP or ASP to the assigned storage volume~~[[s]]~~ of a designated server unit through out-band approach (~~shown in~~ Fig. 3). Finally, the user can use ~~their~~ a web-browser, which has a functionality of invoking embedded video or music, to enjoy ~~their~~ his/her stored multimedia contents.

[019] These and other futures, aspects and advantages of the present invention will become understood with reference to the following description, appended claims, and accompanying figures ~~where~~.

[020]

Description of the Drawings

[021] Referring now to Fig. 1[:]), ~~This figure~~ it demonstrates a configuration comprising a ~~the network connection between~~ connecting a wireless device and a server, ~~where~~

~~a)~~ In the Fig. 1, Net (2) represents a communication link, which may be combined with wireless and ~~non-wireless~~ wired connection media and guarantee that the communication packets can be sent/received between the wireless device and the server. It is also assumed that the net (2) representing an communication infrastructure is built up in such way that ~~the~~ a user ~~from web browser~~ of a wireless device can access and browse any web-site on the Internet, the Intranet, or a local area network (LAN).

[022] ~~b) As described in previous patents submission~~ In Fig. 1, the console support software (5) on the server (3) can be configured to support web-based multi-tasks for the user ~~[[s]] on web browser (8) of the wireless device (1) via a web browser 8.~~ Further, the user ~~on the web browser (8) of the wireless device~~ is able to perform creating structured layered files/~~directory~~ directories or folders, and perform data management operations, such as delete, move, copy, rename for data files or folders/directories and etc., on the an assigned storage volume ~~[[of]] associated with the server (3).~~

~~e) As described in previous patents submission~~ In addition, the other software modules (9) of the wireless device (1) is ~~also capable~~ configured to send data to or receive data from the other service modules (7) ~~of running on the server (3) via communication link (2) through a suitable IP or non-IP based protocol.~~ The data ~~file~~ being sent could be a digital photo picture, a message and etc..

[023] ~~d) As described in previous patents submission~~ Also, the console supporting software (5) of the server (3) and the other software modules (9) of the wireless device (1) can be implemented with any suitable languages such as C, C++, Java, etc. depending on the implementation.

[024] ~~e) As described in previous patents submission~~ Besides, the web-browser (8) of the wireless device (1) can be implemented any suitable software, which. The web browser is configured is capable to communication with web server software (4) on the server (3) ~~or~~ with any other web server through the HTTP protocol.

[026] ~~On the other hand, Fig. 2: This figure has demonstrated how does that~~ the storage system 10 of a server 3 can be allocated assigned to multiple wireless devices ~~as their external storage.~~

a) ~~As described in the previous patents submission,~~ First, the storage system (10) of the server (3) can be partitioned into multiple storage volumes (11) by administration staff through a web-console (13) of a ~~web~~ console host (12).

[027] ~~b) Second,~~ the storage system (10) of the server (3) can be partitioned in such way that each of the wireless devices can be assigned allocated with a storage volume of having a desired size, ~~which can be best supported by~~ therefore, the server 3 can support ~~for~~ maximum numbers of the wireless devices.

[028] ~~e) As described in previous patents submission~~ In addition, the storage connection media could be any kind[[s]] of cables, such as SCSI cable, IP cable, Fiber cable etc. or could be wireless communication media. The storage system itself could be various types.

[029] ~~d) It~~ Finally, it assumes that the storage system 10 can be accessed by each of the wireless devices through IP or non-IP based network and protocols.

[030] Fig. 3: ~~This figure has demonstrated how that~~ a user from a web-browser (8) on a wireless devices device (1) can download data from a known web-site (1512) to his/her assigned allocated external storage (10) ~~of on the~~ server (3). The dash-lined path (a) represents a communication channel between the wireless device (1) and ~~any a~~ remote downloading web-site (1512), ~~which that~~ provides the downloading contents for web download. The dash-lined path (b) represents a communication channel between the wireless devices (1) and the storage server (3). The dash-lined path (c) represents a communication channel between the server 3 wireless devices (1) and the remote web-server (1512), ~~which provides download contents.~~

[031] **The Detailed Description of the Invention**

[032] ~~1-~~ **The Use of the External Storage of by the Wireless Device:**

The Fig. 2 shows a simplified diagram of the wireless devices (1 of Fig. 2) using the external storage system (10 of Fig. 2) of [[a]] the server (3 of Fig. 2), ~~which will for~~ effectively ~~resolve~~ resolving the storage limitation problem ~~of~~ for the wireless devices (1 of Fig. 2).

[033] Partition storage volumes (Fig. 2)

With this invention, the entire storage (10 of Fig. 2) on [[a]] the server (3 of Fig. 2) needs to be partitioned into suitable size of volumes (11 of Fig. 2) such as 4GB for each~~[[,]]~~ ~~which~~ volume. This will allow the server 3 to serve maximum number of the wireless devices (1 of Fig. 2). With the web console support software (5 of Fig. 2) of the server (3 of Fig. 2), ~~the~~ tasks of partitioning the storage system 10 can be done through a web-console (13 of Fig. 2) on a console host (12 of Fig. 2) by an administrative staff.

[034] In order to support ~~such~~ storage partitioning, first the console support software (5 of Fig. 2) of the server (3 of Fig. 2) must send storage information of the server (3 of Fig. 2) to the web-console (13 of Fig. 2) of the console host (12 of Fig. 2). ~~This~~ The storage information including the includes each storage device's name, ~~storage and~~ total size etc.. Second, based on the received storage information the administration staff on the console host (12 of Fig. 2) can use a web-console (13 of Fig. 2) to fill out a request and [[to]] send the request for storage partition information to the console support software (5 of Fig. 2) of the server (3 of Fig. 2). The storage partition information includes the number of the partitions (volumes) and the size of each partition (volume). Third, upon receiving the request of storage partition information from the web-console (13 of Fig. 2) of the console host (12 of Fig. 2), the console support software (5 of Fig. 2) of the server (3 of Fig. 2) performs the actual storage partition ~~to,~~ which divides divide the entire storage into multiple small volumes. Finally, for each small storage volume, a corresponding file system could be built up.

[035] Assign storage volumes (Fig. 2):

Each of the storage volumes together with its corresponding file system (11 of Fig. 2) [[of]] on the storage system (10 of Fig. 2) [[on]] of the server (3 of Fig. 2) needs to be

exclusively ~~assigned~~ allocated and exported to a ~~given~~ specific wireless device (1 of Fig. 2) by the console support software (5 of Fig. 2) ~~[[on]]~~ of the server (3 of Fig. 2).

[036] Data and storage volume management (Fig. 2)

4) With the support of the console support software modules (5 of Fig. 2) of the server system (3 of Fig. 2), the user ~~on web browser (8 of Fig. 2)~~ of the wireless device (1 of Fig. 2) can via the web-browser 8 of Fig. 2 setup the folder/directory structure on the file system of his/her assigned external storage volume (11 of Fig. 2). In addition, the user ~~on web browser (8 of Fig. 2)~~ of the wireless device (1 of Fig. 2) can via the web-browser 8 of Fig. 2 perform all data management operations such as delete, copy, move, rename etc. ~~on that~~ for file system.

[037] In order to support such data management on the external storage (10 of Fig. 2) ~~from web browser (8 of Fig. 2)~~ of allocated to the wireless device (1 of Fig. 2) via the web-browser 8 of Fig. 2, first the console support software modules (5 of Fig. 2) of the server system (3 of Fig. 2) must communicate with the web-browser (8 of Fig. 2) of the wireless device (1 of Fig. 2). Therefore, the user from the web-browser (8 of Fig. 2) of the wireless device (1 of Fig. 2) can choose desired data management operations and send operation information to the console support software modules (5 of Fig. 2) of the server system (3 of Fig. 2). ~~These~~ The mentioned operations include establishing folder/directory, copying, moving, or reaming data file etc. Second, upon receiving the data management operation, the console support software modules (5 of Fig. 2) of the server system (3 of Fig. 2) actually ~~performs processes/executes~~ these requested operations ~~on~~ for the assigned file system of an allocated ~~assigned external~~ storage volume (11 of Fig. 2) on the server system (3 of Fig. 2).

[038] Store data from wireless device into external storage (Fig. 2)

To store the data such as digital photo pictures[[,]] or messages into the ~~assigned~~ file system on the allocated ~~external~~ storage (10 of Fig. 2) of ~~[[a]]~~ the server (3 of Fig. 2), the other software modules (9 of Fig. 2) of the wireless device (1 of Fig. 2) need to send these data to the other service modules (7 of Fig. 2) of the server (3 of Fig. 2) via communication link between them. Upon receiving the data, the other service modules (7 of Fig. 2) of the server (3 of Fig. 2) write these data to the ~~assigned~~ file system of the ~~assigned~~ allocated

storage volume (11 of Fig. 2) ~~on server (3 of Fig. 2)~~ for the wireless device 1. The protocol used between these two communication entities could be either IP or non-IP based protocol.

[039] Download data from a remote web server site into ~~external~~ allocated storage volume (Fig. 3)

[040] Now, referring Fig. 3, If a user of the wireless device (1 of Fig. 3) ~~user~~ wants to download a data from a remote web server (1512 of Fig. 3) into the allocated assigned file system (11 of Fig. 3) of the ~~external~~ allocated storage volume (1140 of Fig. 3) on the server (3 of Fig. 3), the following steps are required:

[041] 1) The user ~~from web browser (8 of Fig. 3)~~ of the a specific wireless device (1 of Fig. 3) via a web-browser (8 of Fig. 3) accesses access to a remote downloading web server site (1512 of Fig. 3) and to obtain the information for the downloading via path (a) of Fig. 3. For example, ~~[[to]]~~ the user get access to a web-page[[,]] which contains the data name for the downloading.

[042] 2) The other software modules (9 of Fig. 3) of a specific the wireless device (1 of Fig. 3) ~~obtains~~ obtain the downloading information, which becomes available in the cached web-pages on the wireless device (1 of Fig. 3) after the web-browser (8 of Fig. 3) accessing access to the download web site (1512 of Fig. 3).

[043] 3) The other software modules (9 of Fig. 3) of a specific the wireless device (1 of Fig. 3) send the obtained downloading information to other service modules (7 of Fig. 3) of the storage server (3 of Fig. 3) via path (b) of Fig. 3.

[044] 4) Upon receiving the downloading information from a specific the wireless device (1), the other service module (7 of Fig. 3) of the storage server (3 of Fig. 3) sends a web download request to download the web-site (1512 of Fig. 3) via path (c) of Fig. 3 based on download information obtained. It then and receives the downloading information data streams from the web server of download the web-site (1512 of Fig. 3).

[045] 5) Upon receiving ~~downloaded~~ downloading data streams, the other service modules (7 of Fig. 3) of the storage server (3 of Fig. 3) write ~~these~~ the data streams for the specific ~~wireless device~~ (1 of Fig. 3) into the ~~assigned~~ allocated file system (11 of Fig. 3) on the server (3 of Fig. 3) for the wireless device (1).

[046] **Retrieve data from ~~external~~ allocated storage ~~of~~ for the wireless device**

[047] 1) If a web-browser (8) on a wireless device 1 has embedded video or music functionality, ~~the web-browser (8 of Fig. 2)~~ a user of [[a]] the wireless device (1 of Fig. 2) can ~~be used~~ use the browser to retrieve and play ~~those~~ multimedia data file such as video or music stored in the ~~allocated wireless device's external~~ storage volume (10 of Fig. 2), ~~which actually~~ located on [[a]] the server (3 of Fig. 2).

[048] 2) If there is a needs, the other software module (9 of Fig. 2) of the wireless device (1 of Fig. 2) also can retrieve data file from the allocated ~~assigned~~ file system of the ~~assigned~~ allocated storage volume (11 of Fig. 2) on the server (3 of Fig. 2).

[049] **Support external storage for a large number of the wireless devices**

[050] If [[we]] there is a need to provide each user a 2GB of storage space, then a 160GB disk drive can support 80 users. A 4096GB (4 Tera Bytes) storage system on [[a]] the server unit can support 2024 user. Each of the server units only can efficiently support a limited size of the storage system. In order to support a large number of the wireless devices, ~~with external storage~~ such as for 500,000 of them wireless devices, a larger number of the servers ~~are~~ is required, in this case 250 servers is required. In order to let a larger number of the servers to effectively support the larger number of the wireless devices, an infrastructure like CCDSVM is desirable, which has been described in previous patent[[s]] applications ~~submission~~. With the CCDSVM the control management station can control larger number of storage servers to provide external storage for a huge number of the wireless devices.

<<The Clean version of the amended specification>>

System And Method For Wireless Device Access To External Storage

Cross Reference to Prior Application

[001] This invention is a continuation application of the US patent application No. 10/726,897 filed on 12/04/2003, which relates to a provisional application number 60/401,238 of “Concurrent Web Based Multi-task Support for Control Management System” filed on 08/06/2002. This invention also relates to a provisional application number 60/402,626 of “IP Based Distributed Virtual SAN” filed on 08/12/2002. All mentioned prior applications are herein referenced incorporated by reference in their entirety for all purpose.

Field of the Invention

[002] This invention focuses on how a wireless device can actually use external storage provided by a storage server.

Background Information

[003] Terminology:

The terminologies described in next few sections reflect the scope and are part of present invention.

[004] The Internal Storage of a System:

The storage media such as hard disk drives, memory sticks, memory etc. is connected to a system directly through bus or a few inches of cable. Therefore, the storage media actually is a component of the system in an enclosure.

[005] The External Storage of a System:

The external storage media is not a component of the system in a same enclosure. Therefore, they have to be connected through a connecting medium (e.g. a cable) such as Ethernet cable for IP based storage, Fiber channel cable for fiber channel storage, or such as

wireless medium and etc.. The storage media of an external storage could be magnetic hard disk drives, solid state disk, optical storage drives, memory card, etc. and could be in any form such as Raid, which usually consists of a group of hard disk drives.

[006] The Storage Partition, its Volumes, and the Corresponding File System:

To effectively use storage system, each storage device usually needs to be partitioned into small volumes. After the partition, each of the volumes can be used to establish a file system on it. To simplify the discussion herein, the term of the storage volume, its corresponding file system, and the term of the partition of the storage device are often used without differentiation.

[007] CCDSVM:

It is an abbreviation for a central controlled distributed scalable virtual machine system. The CCDSVM allows a control management station to control a group of systems and provide distributed services to a client system on the Internet, the Intranet, and an LAN environment.

[008] ISP & ASP:

The ISP refers to Internet service provider and the ASP refers to application service provider.

[009] Figures:

[010] Fig. 1 illustrates an embodiment of the instant application, the Fig. 1 is the same as Fig. 1 of the previous application of the “Concurrent Web Based Multi-task Support for Control Management System” with an exception of replacing a console host with a wireless device.

[011] Fig. 2 is the same as Fig. 1 of the above except that it shows a more detailed storage system controlled by a server. In addition, multiple wireless devices are presented for access to the storage system.

[012] Fig. 3 shows a scheme of a wireless device downloading contents from an ISP/ASP or other web sites to an external storage allocated for the wireless device.

[013] Fig. 4 similar to the Fig. 1 of the previous application of the “IP Based Distributed Virtual SAN” with exception that each IP storage server provides a file system as external storage for each of the wireless devices instead of providing IP based virtual SAN service. Also, each host in said Fig. 1 actually is replaced by a wireless device of Fig. 4.

[014] Unless specified, the programming languages and the protocols used by each software modules of instant application, and the computing systems used in this invention are assumed to be the same as described in the mentioned previous patent applications.

[015] In addition, in the drawing, like elements are designated by like reference numbers. Further, when a list of identical elements is present, only one element will be given the reference number.

[016] **Brief Description of the Invention**

[017] Today the wireless users commonly face a problem of lack of storage capacity configured on their wireless devices such as cell phone or PDA, which are usually limited to 256MB for PDA and much less for cell phone. To effectively solve this problem and let users own multiple gigabytes (GB) of storage for their wireless devices as well as allowing the users to use the GB storage for their multimedia applications, the storage of a server can be used as the external storage for the wireless devices. This technology has been briefly introduced in the previous parent patent applications.

[018] Now let us examine how the external storage can actually be used by the wireless devices. First, let each server unit (e.g. the server 3 of the Fig. 2) partitions its storage system into volume and each of the volumes will have multiple GB in size. Therefore, each user of the wireless devices can be exclusively assigned and access a specific storage volume. For example, if we need to provide each user a 4GB storage space, then a 160GB disk drive can

support 40 users. Therefore, a 4096GB storage system on the server unit can support a total of 1024 wireless devices for users. Further, any data on the wireless device can be transmitted to an assigned storage volume. In addition, the user of the wireless device also can download the multimedia data from an ISP or ASP to the assigned storage volume of a designated server unit through out-band approach shown in Fig. 3. Finally, the user can use a web-browser, which has a functionality of invoking embedded video or music, to enjoy his/her stored multimedia contents.

[019] These and other futures, aspects and advantages of the present invention will become understood with reference to the following description, appended claims, and accompanying figures.

[020] **Description of the Drawings**

[021] Referring now to Fig. 1, it demonstrates a configuration comprising a network connecting a wireless device and a server.

In the Fig. 1, Net (2) represents a communication link, which may be combined with wireless and wired connection media and guarantee that the communication packets can be sent/received between the wireless device and the server. It is also assumed that the net (2) representing an communication infrastructure is built up in such way that a user of a wireless device can access and browse any web-site on the Internet, the Intranet, or a local area network (LAN).

[022] In Fig. 1, the console support software (5) on the server (3) can be configured to support web-based multi-tasks for the user of the wireless device (1) via a web browser 8. Further, the user of the wireless device is able to perform creating structured layered files directories or folders, and perform data management operations, such as delete, move, copy, rename for data files or folders/directories and etc.. on an assigned storage volume associated with the server (3).

In addition, the other software modules (9) of the wireless device (1) is configured to send data to or receive data from the other service modules (7) running on the server (3) via

communication link (2) through a suitable IP or non-IP based protocol. The data being sent could be a digital photo picture, a message and etc..

[023] Also, the console supporting software (5) of the server (3) and the other software modules (9) of the wireless device (1) can be implemented with any suitable languages such as C, C++, Java, etc. depending on the implementation.

[024] Besides, the web-browser (8) of the wireless device (1) can be implemented any suitable software. The web browser is configured to communication with web server software (4) on the server (3) with any other web server through the HTTP protocol.

[026] On the other hand, Fig. 2 has demonstrated that the storage system 10 of a server 3 can be allocated to multiple wireless devices.

First, the storage system (10) of the server (3) can be partitioned into multiple storage volumes (11) by administration staff through a web-console (13) of a console host (12).

[027] Second, the storage system (10) of the server (3) can be partitioned in such way that each of the wireless devices can be allocated with a storage volume having a desired size, therefore, the server 3 can support maximum numbers of the wireless devices.

[028] In addition, the storage connection media could be any kind of cables, such as SCSI cable, IP cable, Fiber cable etc. or could be wireless communication media. The storage system itself could be various types.

[029] Finally, the storage system 10 can be accessed by each of the wireless devices through IP or non-IP based network and protocols.

[030] Fig. 3 has demonstrated that a user from a web-browser (8) on a wireless device (1) can download data from a known web-site (15) to his/her allocated external storage (10) on the server (3). The dash-lined path (a) represents a communication channel between the wireless device (1) and a remote downloading web-site (15) that provides downloading

contents. The dash-lined path (b) represents a communication channel between the wireless devices (1) and the storage server (3). The dash-lined path (c) represents a communication channel between the server 3 and the remote web-server (15).

[031] **The Detailed Description of the Invention**

[032] **The Use of the External Storage by the Wireless Device:**

The Fig. 2 shows a simplified diagram of the wireless devices (1) using the external storage system (10) of the server (3) for effectively resolving the storage limitation problem for the wireless devices (1).

[033] **Partition storage volumes (Fig. 2)**

With this invention, the entire storage (10) on the server (3) needs to be partitioned into suitable size of volumes (11) such as 4GB for each volume. This will allow the server 3 to serve maximum number of the wireless devices (1). With the web console support software (5) of the server (3), tasks of partitioning the storage system 10 can be done through a web-console (13) on a console host (12) by an administrative staff.

[034] In order to support storage partitioning, first the console support software (5) of the server (3) must send storage information of the server (3) to the web-console (13) of the console host (12). The storage information includes each storage device's name and total size etc.. Second, based on the received storage information the administration staff on the console host (12) can use a web-console (13) to fill out a request and send the request for storage partition information to the console support software (5) of the server (3). The storage partition information includes the number of the partitions (volumes) and the size of each partition (volume). Third, upon receiving the request of storage partition information from the web-console (13 of Fig. 2) of the console host (12), the console support software (5) of the server (3) performs the actual storage partition to divide the entire storage into multiple small volumes. Finally, for each small storage volume, a corresponding file system could be built up.

[035] Assign storage volumes (Fig. 2):

Each of the storage volumes together with its corresponding file system (11) on the storage system (10) of the server (3) needs to be exclusively allocated and exported to a specific wireless device (1) by the console support software (5) of the server (3).

[036] Data and storage volume management (Fig. 2)

With the support of the console support software modules (5) of the server (3), the user of the wireless device (1) can via the web-browser 8 of Fig. 2 setup folder/directory structure on the file system of his/her assigned external storage volume (11). In addition, the user of the wireless device (1) can via the web-browser 8 of Fig. 2 perform all data management operations such as delete, copy, move, rename etc. for file system.

[037] In order to support such data management on the external storage (10) allocated to the wireless device (1 of Fig. 2) via the web-browser 8 of Fig. 2, first the console support software modules (5) of the server (3) must communicate with the web-browser (8) of the wireless device (1). Therefore, the user from the web-browser (8) of the wireless device (1) can choose desired data management operations and send operation information to the console support software modules (5) of the server (3). The mentioned operations include establishing folder/directory, copying, moving, or reaming data file etc. Second, upon receiving the data management operation, the console support software modules (5) of the server (3) actually processes/executes these requested operations for the assigned file system of an allocated storage volume (11) on the server (3).

[038] Store data from wireless device into external storage (Fig. 2)

To store the data such as digital photo pictures or messages into the file system on the allocated storage (10) of the server (3), the other software modules (9) of the wireless device (1) need to send these data to the other service modules (7) of the server (3) via communication link between them. Upon receiving the data, the other service modules (7) of the server (3) write these data to the file system of the allocated storage volume (11) for the wireless device 1. The protocol used between these two communication entities could be either IP or non-IP based protocol.

[039] **Download data from a remote web server site into allocated storage volume**

[040] Now, referring to Fig. 3, If a user of the wireless device (1) wants to download a data from a remote web server (15) into the allocated file system (11) of the allocated storage volume (11) on the server (3), the following steps are required:

[041] 1) The user of the wireless device (1) via a web-browser (8) access to a remote downloading web server site (15) to obtain information for the downloading via path (a) of Fig. 3. For example, the user access to a web-page which contains the data name for the downloading.

[042] 2) The other software modules (9) of the wireless device (1) obtain the downloading information, which becomes available in the cached web-pages on the wireless device (1) after the web-browser (8) access to the web site (15).

[043] 3) The other software modules (9) of the wireless device (1) send the obtained downloading information to other service modules (7) of the storage server (3) via path (b) of Fig. 3.

[044] 4) Upon receiving the downloading information from the wireless device (1), the other service module (7) of the storage server (3) sends a web download request to the web-site (15) via path (c) of Fig. 3 and receives the downloading data streams from the web server of the web-site (15).

[045] 5) Upon receiving downloading data streams, the other service modules (7) of the storage server (3) write the data streams into the allocated file system (11) on the server (3) for the wireless device (1).

[046] **Retrieve data from allocated storage for the wireless device**

[047] 1) If a web-browser (8) on a wireless device 1 has embedded video or music functionality, a user of the wireless device (1) can use the browser to retrieve and play

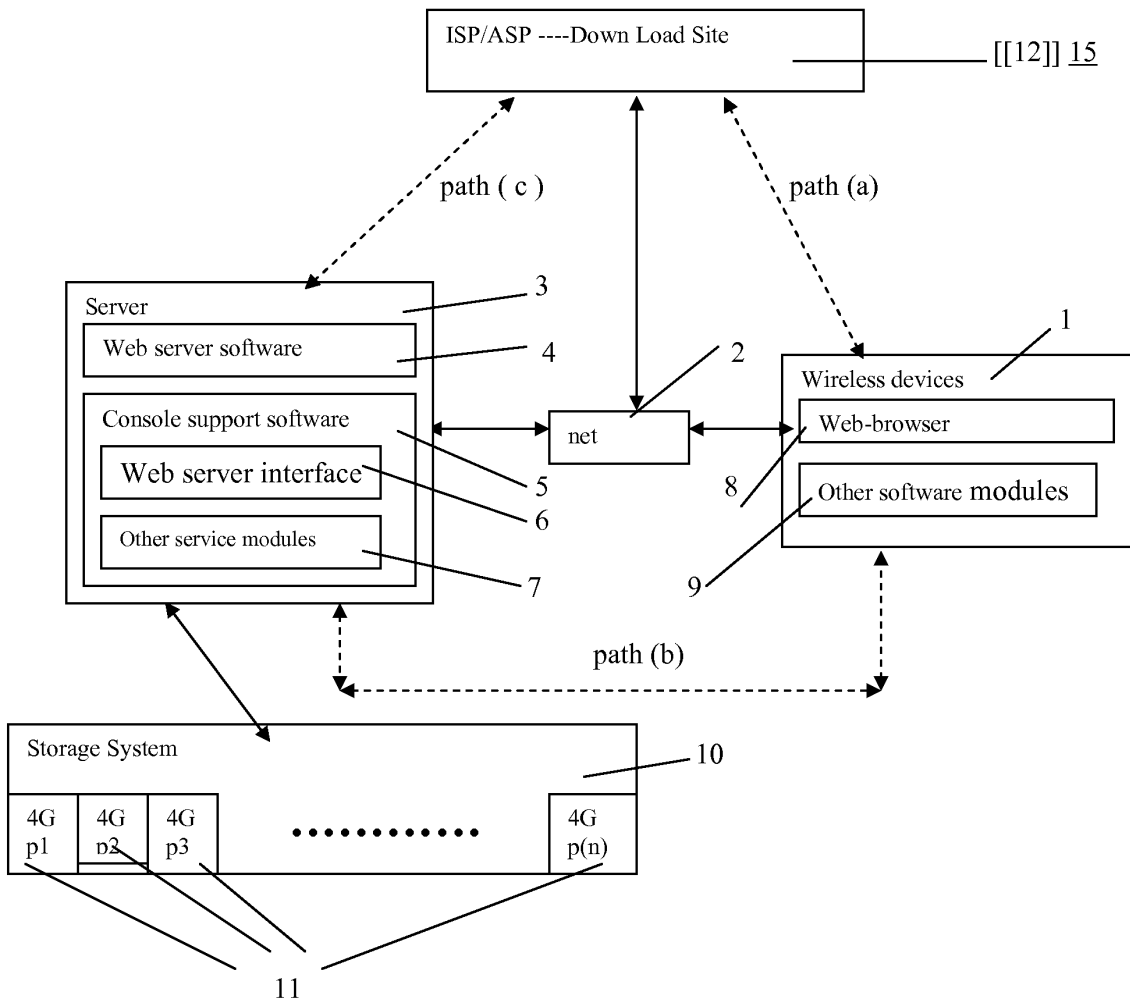
multimedia data file such as video or music stored in the allocated storage volume (10) located on the server (3).

[048] 2) If there is a needs, the other software module (9) of the wireless device (1) also can retrieve data file from the allocated file system of the allocated storage volume (11) on the server (3).

[049] **Support external storage for a large number of the wireless devices**

[050] If there is a need to provide each user a 2GB of storage space, then a 160GB disk drive can support 80 users. A 4096GB (4 Tera Bytes) storage system on the server unit can support 2024 user. Each of the server units only can efficiently support a limited size of the storage system. In order to support a large number of the wireless devices, such as for 500,000 wireless devices, a larger number of the servers is required, in this case 250 servers is required. In order to let a larger number of the servers to effectively support the larger number of the wireless devices, an infrastructure like CCDSVM is desirable, which has been described in previous patent applications. With the CCDSVM the control management station can control larger number of storage servers to provide external storage for a huge number of the wireless devices.

Wireless out-band download



Sheng Tai (Ted) Tsao

(Replacement Sheet)

Wireless devices supports in a simple environment

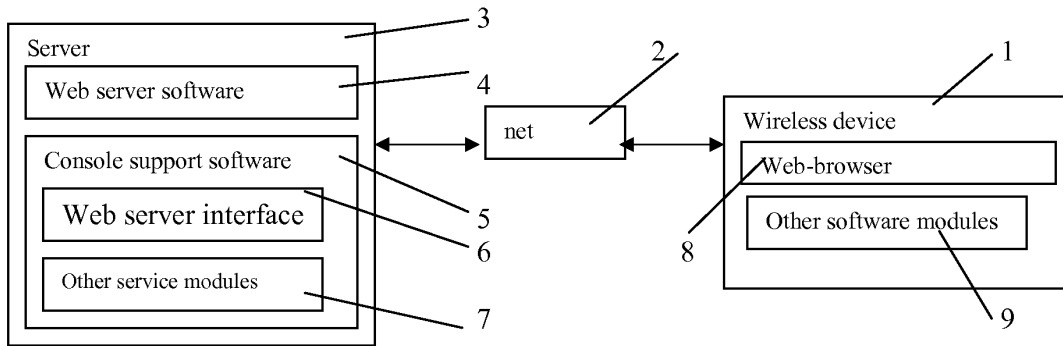


Fig. 1

(Replacement Sheet)

Wireless devices access external storage through web browser

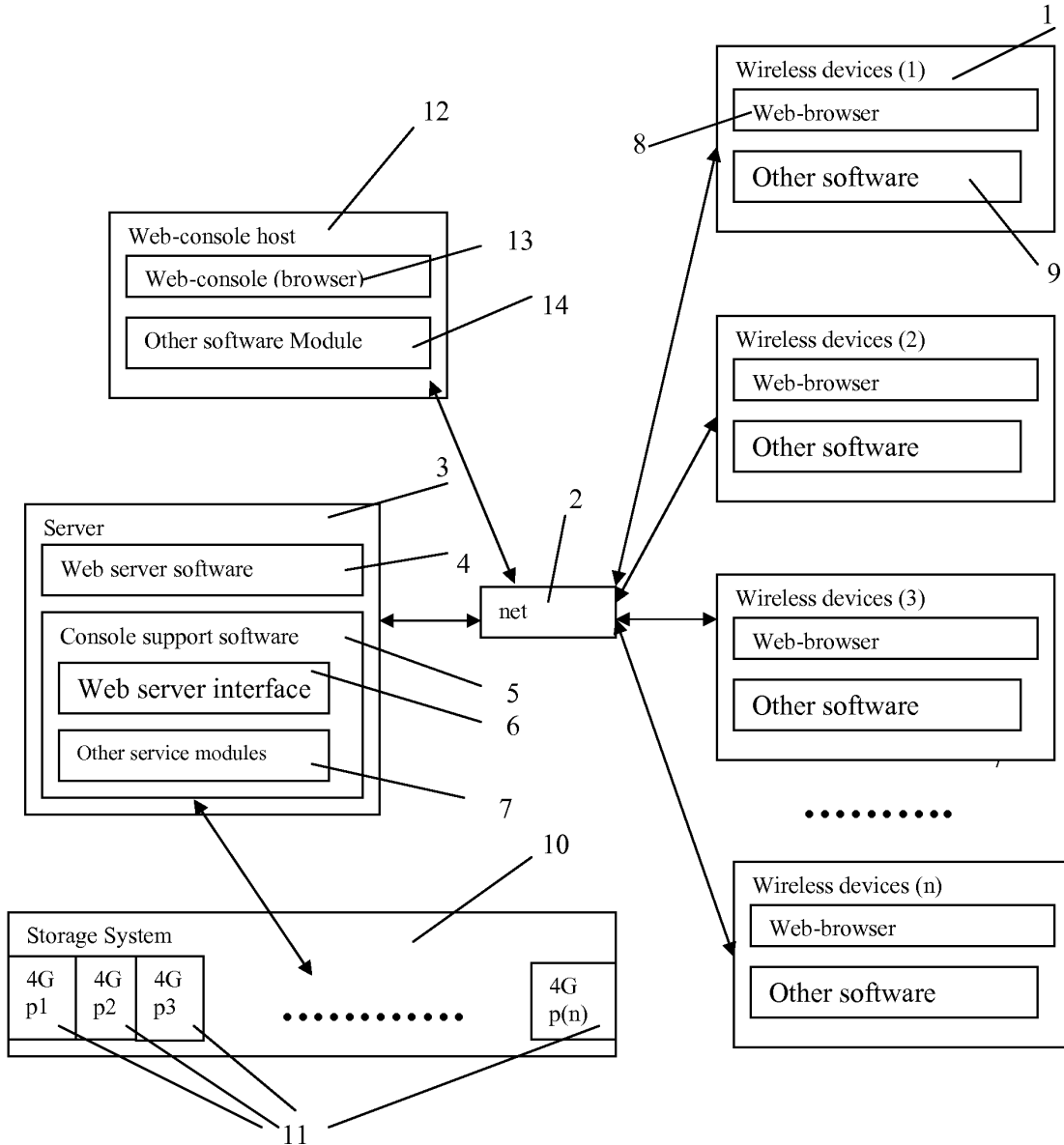


Fig. 2

Wireless out-band download

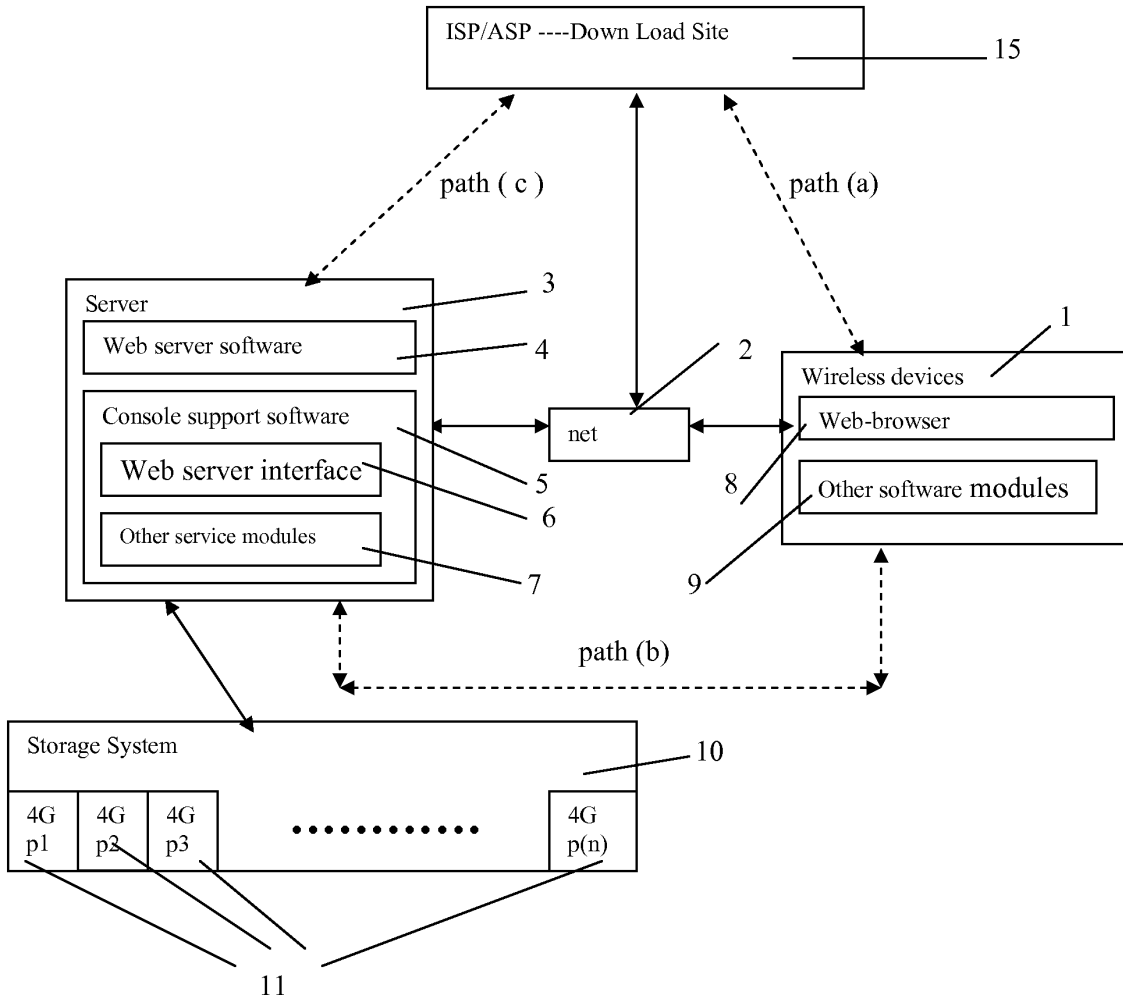


Fig. 3

The CCDSVM Support External Device for Huge Number of Wireless Device

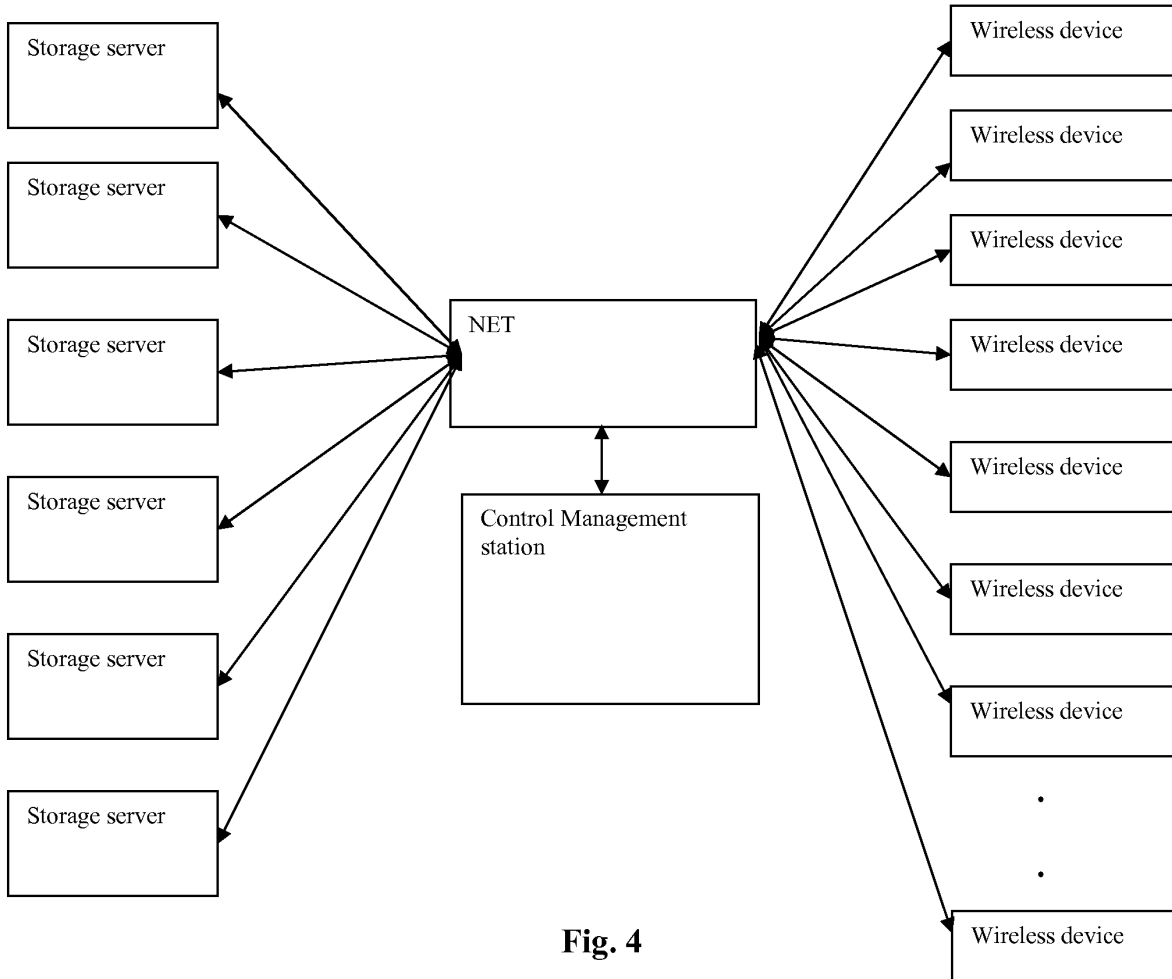


Fig. 4



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Table with 4 columns: APPLICATION NUMBER (14/079,831), FILING OR 371(C) DATE (11/14/2013), FIRST NAMED APPLICANT (Sheng Tai Tsao), ATTY. DOCKET NO./TITLE

77501
Sheng Tai (Ted) Tsao
3906 Borgo Common.
Fremont, CA 94538

CONFIRMATION NO. 9132
FORMALITIES LETTER



Date Mailed: 11/29/2013

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, is required. The substitute specification must be submitted with markings and be accompanied by a clean version (without markings) as set forth in 37 CFR 1.125(c) and a statement that the substitute specification contains no new matter (see 37 CFR 1.125(b)). The specification, claims, and/or abstract page(s) submitted is not acceptable and cannot be scanned or properly stored because:
• The line spacing on the specification, claims, and/or abstract is not 1 1/2 or double spaced (see 37 CFR 1.52(b)).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

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Alexandria VA 22313-1450

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Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY. DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 14/079,831, 11/14/2013, 3715, 730, [blank], 19, 3

CONFIRMATION NO. 9132

FILING RECEIPT



77501
Sheng Tai (Ted) Tsao
3906 Borgo Common.
Fremont, CA 94538

Date Mailed: 11/29/2013

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Inventor(s) Sheng Tai Tsao, Fremont, CA;
Applicant(s) Sheng Tai (Ted) Tsao, Fremont, CA
Assignment For Published Patent Application Sheng Tai (Ted) Tsao, Fremont, CA

Power of Attorney: None
Domestic Priority data as claimed by applicant This application is a CON of 10/726,897 12/04/2003 PAT 8606880

Foreign Applications for which priority is claimed (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.) - None. Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 14/079,831
Projected Publication Date: To Be Determined - pending completion of Corrected Papers
Non-Publication Request: No
Early Publication Request: No

**** SMALL ENTITY ****

Title

System And Method For Support Wireless Device Access To External Storage

Preliminary Class

434

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: Yes

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
14/079,831

APPLICATION AS FILED - PART I

(Column 1)		(Column 2)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (j), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	19 minus 20 = *	*	x 40 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x 210 =	0.00			
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).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	730		TOTAL	

APPLICATION AS AMENDED - PART II

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

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
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 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
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UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>	Attorney Docket No.	
	First Inventor	Sheng Tai (Ted) Tsao
	Title	Method and System for wireless devi
	Express Mail Label No.	

APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents.</i>	ADDRESS TO: Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450
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<p>1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17)</p> <p>2. <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.</p> <p>3. <input checked="" type="checkbox"/> Specification [Total Pages <u>16</u>] Both the claims and abstract must start on a new page (For information on the preferred arrangement, see MPEP 608.01(a))</p> <p>4. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) [Total Sheets <u>4</u>]</p> <p>5. Oath or Declaration [Total Sheets <u>2</u>] a. <input checked="" type="checkbox"/> Newly executed (original or copy) b. <input type="checkbox"/> A copy from a prior application (37 CFR 1.63(d)) <i>(for continuation/divisional with Box 18 completed)</i> i. <input type="checkbox"/> DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</p> <p>6. <input checked="" type="checkbox"/> Application Data Sheet. See 37 CFR 1.76</p> <p>7. <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) <input type="checkbox"/> Landscape Table on CD</p> <p>8. Nucleotide and/or Amino Acid Sequence Submission <i>(if applicable, items a. – c. are required)</i> a. <input type="checkbox"/> Computer Readable Form (CRF) b. <input type="checkbox"/> Specification Sequence Listing on: i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or ii. <input type="checkbox"/> Paper c. <input type="checkbox"/> Statements verifying identity of above copies</p>	<p style="text-align: center;">ACCOMPANYING APPLICATION PARTS</p> <p>9. <input type="checkbox"/> Assignment Papers (cover sheet & document(s)) Name of Assignee _____</p> <p>10. <input type="checkbox"/> 37 CFR 3.73(b) Statement <input type="checkbox"/> Power of Attorney <i>(when there is an assignee)</i></p> <p>11. <input type="checkbox"/> English Translation Document <i>(if applicable)</i></p> <p>12. <input type="checkbox"/> Information Disclosure Statement (PTO/SB/08 or PTO-1449) <input type="checkbox"/> Copies of citations attached</p> <p>13. <input type="checkbox"/> Preliminary Amendment</p> <p>14. <input type="checkbox"/> Return Receipt Postcard (MPEP 503) <i>(Should be specifically itemized)</i></p> <p>15. <input type="checkbox"/> Certified Copy of Priority Document(s) <i>(if foreign priority is claimed)</i></p> <p>16. <input type="checkbox"/> Nonpublication Request under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.</p> <p>17. <input type="checkbox"/> Other: _____</p>
--	--

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

Continuation Divisional Continuation-in-part (CIP) of prior application No.: 10/726,897.....

Prior application information: Examiner Sall, El Hadji Malick Art Unit: 2457

19. CORRESPONDENCE ADDRESS

The address associated with Customer Number: 77501 OR Correspondence address below

Name	Sheng Tai (Ted) Tsao				
Address	3906 Borgo Common				
City	Fremont	State	CA	Zip Code	94538
Country	USA	Telephone	408-813-0536	Email	ted.tsao@sttwebos.com

Signature	/shengtai tsao/	Date	11/14/2013
Name (Print/Type)	Sheng Tai (Ted) Tsao	Registration No. (Attorney/Agent)	

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	System And Method For Support Wireless Device Access To External Storage
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As the below named inventor, I hereby declare that:

This declaration is directed to: The attached application, or United States application 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.

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LEGAL NAME OF INVENTOR

Inventor: Sheng Tai (Ted) Tsao Date (Optional): 11/14/2013

Signature: /shengtai tsao/

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

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Sheng Tai (Ted) Tsao

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Sheng Tai (Ted) Tsao, et al.
TYPE: Small Entity & Continuation Application for 10/726,897
FILING DATE: 11/14/2013
TITLE: The System And Method For Support Wireless Device Access to
External Storage
EXAMINER: Sall, El Hadji Malick
ART UNIT: 2457

Mail Stop Amendment
COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

Continuation Application for the application 10/726,897

Dear Madam:

This communication directs to file a continuation application for the application 10/726,897 before the prior application being patented. Therefore, it is a valid continuation application Enclosed please find:

- 1) A copy of Oath declaration.
- 2) A copy of the originally specification and drawings filed on 12/04/2003.
- 3) The referenced prior applications and application data sheet starts on the page 2.
- 4) A substitute Abstract starts on the page 3.
- 5) A copy of application data sheet (ADS).
- 6) The claims start on the page 4.

Thanks helps from the USPTO to enter the continuation application.

Respectively Submitted.

11/14//2013

//Shanegtai Tsao//
Sheng Tai (Ted) Tsao
2979 Heidi Drive,
San Jose, CA 95132
408-813-0536 or 510-580-8592

Sheng Tai (Ted) Tsao

1) Amendment to the Priority:

Please replace the first paragraph with following:

“ Field of The Invention Reference To The Prior Arts
This invention is a the continuation application of 10/726,897 which is filed on 12/04/2003 which has referenced the provisional previous invention, application No. number 60/401, 238 filed on 08/06/2002 of “Concurrent Web-Based Multi-task Support for Control Management System”, where the claim 20 item a), b), d), claim 30 item b), and together with claim 36 represent an invention of using storage of a server system as the external storage for wireless devices. This invention focuses on how can a wireless device user actually use external storage. Specially it focus on how can a wireless device to download data to its external storage, which its principle has preliminary described in claim 19 of previous invention, and referenced provisional application No. number 60/402,626 filed in 08/12/2002. All mentioned applications are herein incorporated by reference in their entirety for all purpose of “IP-Based Distributed Virtual SAN”, to transmit data in wireless environment.”

Sheng Tai (Ted) Tsao

AMENDMENT TO THE ABSTRACT:

Please withdraw the original abstract in the application filed on 12/04/2003 and replace it with the following abstract:

“

Abstraction

To meet the needs for storing larger volume personal information for user of wireless device, it is desire to provide extra storage space to the wireless device such as for cell phone etc due to the limited storage space that the wireless device has. Instant application disclosed a system and method for the wireless device to efficiently and effectively use remotely located storage space provided by a server.

“

Sheng Tai (Ted) Tsao

AMENDMENT IN THE CLAIMS:

1 – 10 (*Canceled*)

11. (*New*) A server providing storage space to wireless device, the server comprising:
at least one storage device configured with at least one storage space; and
a storage medium comprising program code that, when executed by the server, causes the server to:
allocate the storage space of a predefined capacity to be accessible to the wireless device, create a folder structure residing in the storage space;
establish a link for the wireless device access to the folder structure in the storage space; and
update the folder structure whenever a user from the wireless device to performs an operation to the folder structure in the storage space.
12. (*New*) The server as recited in claim 11, wherein the updating of the folder structure comprises: updating the folder structure in response to a request, received from the wireless device, for creating a folder in the folder structure.
13. (*New*) The server as recited in claim 12, , wherein the updating of the folder structure comprises: updating the folder structure in response to a request, received from the wireless device, for access to the folder in the folder structure for storing data therein or retrieving data therefrom, wherein the data is a file or a message.
14. (*New*) The server as recited in claim 13, , wherein the updating of the folder structure comprises: updating the folder structure in response to a request, received from the wireless device, for deleting or moving or copying or renaming a file or a folder being stored in the folder structure.
15. (*New*) The server as recited in claim 12, wherein the updating of the folder structure comprises: updating the folder structure in response to a request, received from the

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wireless device for storing a file to be downloaded from a remote web server directly into the storage space instead of downloading the file into the wireless device itself.

16. (*New*) The server as recited in claim 12, wherein the folder structure is created with multiple folders on a file system configured in the storage space accessible to the wireless devices.
17. (*New*) The server as recited in claim 12, wherein the user of the wireless device is allowed via a web browser executed thereof to perform said operation to the folder structure in the storage space.
18. (*New*) The server as recited in claim 12, wherein the link includes wireless communication media.
19. (*New*) A method for a wireless device downloading file comprising:
 - obtaining, by the wireless device, download information for a file from a remote web server;
 - transmitting the download information cached in the wireless device to a storage server; and
 - causing the storage server in accordance with the downloading information to download the file from the remote web server directly into a storage space configured in the storage server.
20. (*New*) The method as recited in claim 19, wherein the remote web server is accessible through the world wide web and comprises at least one downloadable file.
21. (*New*) The method as recited in claim 19, wherein the storage space is configured in a storage device residing in the storage server and comprises a file system.
22. (*New*) The method as recited in claim 19, wherein the wireless device is operable to allow a user via a web browser executed thereof to request download a file from a

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remote web server into the storage space directly instead of downloading the file into the wireless device itself.

23. (*New*) The method as recited in claim 19, wherein the wireless device is configured via a link access to the storage space residing in the storage server.
24. (*New*) A system supporting wireless device downloading file, the system comprising:
at least one storage server and
one wireless device, the storage server configured with at least one storage space of a predefined capacity to allow the wireless device via a link remotely access to the storage space;
wherein the wireless device is configured to allow a user via a web browser executed thereof to download a file from a remote web server directly into the allocated storage space in the storage server instead of downloading the file into the wireless device itself.
25. (*New*) The system as recited in the claim 24, wherein said downloading a file from a remote web server comprises:
obtaining, by the wireless device, download information for the file from the remote web server;
transmitting the download information cached in the wireless device to the storage server; and
causing the storage server in accordance with the downloading information to download the file from the remote web server directly into the storage space allocated to the wireless device.
26. (*New*) The system as recited in claim 24, wherein the wireless device has a function of making or receiving a phone call.
27. (*New*) The system as recited in claim 24, wherein the storage space is configured in a storage device residing in the storage server and comprises a file system.

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28. (*New*) The system as recited in claim 24, wherein the remote web server is accessible through the world wide web and comprises at least one downloadable file.
29. (*New*) The system as recited in claim 24, wherein the link includes wireless communication media.

The Use of Wireless Devices' External Storage

**By: Sheng (Ted) Tai Tsao
11/19/2003**

Field of the Invention

This invention is the continuation of the previous invention, application number 60/401, 238 of "Concurrent Web Based Multi-task Support for Control Management System", where the claim 20 item a), b), d), claim 30 item b), and together with claim 36 represent an invention of using storage of a server system as the external storage for wireless devices. This invention focuses on how can a wireless device user actually use external storage. Specially it focus on how can a wireless device to download data to its external storage, which its principle has preliminary described in claim 19) of previous invention, application number 60/402,626 of "IP Based Distributed Virtual SAN", to transmit data in wireless environment.

Background Information

a) Terminology:

The Internal Storage of a System:

The storage media such as hard disk drives, memory sticks, memory etc is connected to a system directly through bus or a few inches of cable. Therefore, the storage media actually is a component of a system in a same enclosure.

The External Storage of a System:

The storage media is not a component of a system in a same enclosure. Therefore, they has to be connected through longer cable such as Ethernet cable for IP based storage, Fiber channel cable for fiber channel storage, or wireless media etc. The storage media of external storage could be magnetic hard disk drives, solid sate disk, optical storage drives, memory card, etc. and could be in any form such as Raid, which usually consists a group of hard disk drives.

The Storage Partition, its Volumes, and the Corresponding File System:

To effectively use the storage system, the storage usually needs to be partitioned into small volumes. After partition, each volumes can be used to establish file systems on it. To simplify the discussion, the term of the storage volume, its corresponding file system, and the term of the partition of a storage are used without differentiation in this invention.

CCDSVM:

It is an abbreviation for central controlled distributed scalable virtual machine system. The CCDSVM allows a control management station to control group of systems and provide distributed services to client system in Internet, Intranet, and LAN environment.

ISP & ASP:

Internet service provider and application service provider.

b) Figures:

- Fig. 1: This is the same figure as Fig. 1 of "Concurrent Web Based Multi-task Support for Control Management System" with exception of renaming console host as wireless device.
- Fig. 2: This is the same figure as Fig. 1 except that it shows the more details of storage system controlled by the server. In addition, multiple wireless devices are presented.
- Fig. 3: This figure shows the scheme of wireless device download contents from ISP/ASP or other web sites to the external storage of this wireless device.
- Fig. 4: This is the same figure as Fig. 1 of "IP Based Distributed Virtual SAN" with exception that each IP storage server provide file system as external storage for wireless devices instead of provide IP based virtual SAN service. Also, each host actually is a wireless device.

c) Assumptions:

Unless specified, the programming language, the protocols used by each software modules, and the system used described in this invention are assumed to be the same as described in previous patents submission.

In the drawing, like elements are designated by like reference numbers. Further, when a list of identical elements is present, only one element will be given the reference number.

Brief Description of the Invention

Today the wireless users commonly face the problem of lack of storage capacity on their wireless devices such as cell phone or PDA, which usually limited to 256MB for PDA and much less for cell phone. To effectively solve this problem and let users own multiple GB of storage for their wireless devices as well as allow users to use GB storage for their multimedia application, the storage on a server can be used as external storage for wireless devices. This technology has been claimed in previous two patents submission by the same author. Now we can examine how does the external storage actually be used by the wireless device. We can let each server unit (3 of Fig. 2) partitions its storage system in such way that each volumes will have multi-GB in size. Therefore, each user from web-browser of any of wireless devices can exclusively be assigned and exclusively access a specific storage volume on a server unit. For example, if we need to provide each user 4GB of storage space, then a 160GB disk drive can

support 40 users. A 4096GB storage system on a server unit can support 1024 user. Further, any data on the wireless device can be transmitted to assigned storage volumes on a server unit. In addition, the user on the wireless device also can download the multimedia data from any ISP or ASP to the assigned storage volumes of a designated server unit through out-band approach (Fig. 3). Finally, the user can use their web-browser, which has functionality of invoking embedded video or music, to enjoy their stored multimedia contents.

These and other futures, aspects and advantages of the present invention will become understood with reference to the following description, appended claims, and accompanying figures where:

Description of the Drawings

Fig. 1: This figure demonstrates the network connection between a wireless device and a server, where

- a) Net (2) represent a communication link, which may combined with wireless and non-wireless connection media and guarantee the communication packet can be sent/received between wireless device and the server. It is also assume that the net (2) infrastructure is built up in such way that the user from web-browser of a wireless device can access and browse any web-site on the Internet, Intranet.
- b) As described in previous patents submission, the console support software (5) on server (3) can support web-based multi-task for users on web-browser (8) of wireless device (1). Further, the user on the web-browser (8) is able to perform creating structured layered files/directory or folders, and perform data management operations such as delete, move, copy, rename for data files or folders/directories etc on the assigned storage volume of server (3).
- c) As described in previous patents submission, the other software modules (9) of wireless device (1) is also capable to send data to or receive data from other service modules (7) of server (3) via communication link (2) through suitable IP or non-IP based protocol. The data file being sent cold be a digital photo picture, a message etc..
- d) As described in previous patents submission, the console supporting software (5) of server (3) and the other software modules (9) of wireless device (1) can be implemented with any suitable languages such as C, C++, Java, etc.
- e) As described in previous patents submission, the web-browser (8) of wireless device (1) can be any suitable software, which is capable to communication with web server software (4) on server (3) or with any other web server through HTTP protocol.

Fig. 2: This figure demonstrated how does the storage of a server can be assigned to multiple wireless devices as their external storage.

- a) As described in previous patents submitting, the storage system (10) of server (3) can be partitioned into multiple volumes (11) by administration staff through web-console (13) of web console host (12).

- b) The storage system (10) of server (3) can be partitioned in such way that each wireless devices can be assigned with a volume of desired size, which can be best supported by the server for maximum number of wireless devices.
- c) As described in previous patents submitting, the storage connection media could be any kinds such as SCSI cable, IP cable, Fiber cable etc. The storage system itself could be various types.
- d) It assumes that the storage system can be accessed through IP or non-IP based network and protocols.

Fig. 3: This figure demonstrated how a user from a web-browser (8) on wireless devices(1) can download data from a known web-site (12) to his/her assigned external storage (10) of server (3). The dash-lined path (a) represents a communication channel between wireless device (1) and any remote download web-site (12), which provides the contents for web download. The dash-lined path (b) represent a communication channel between wireless devices (1) and the storage server (3). The dash-lined path (c) represents a communication channel between wireless devices (1) and the remote web-server (12), which provide download contents.

The Detailed Description of the Invention

1: The Use of the External Storage of the Wireless Device:

The Fig. 2 shows a simplified diagram of the wireless devices (1 of Fig. 2) using external storage system (10 of Fig. 2) of a server (3 of Fig. 2), which will effectively resolve the storage limitation problem of wireless devices (1 of Fig. 2).

- Partition storage volumes (Fig. 2)

With this invention, the entire storage (10 of Fig. 2) on a server (3 of Fig. 2) need to be partitioned into suitable size of volumes (11 of Fig. 2) such as 4GB each, which will allow the server to serve maximum number of wireless devices (1 of Fig. 2). With the web console support software (5 of Fig. 2) of the server (3 of Fig. 2), The task of partitioning storage can be done through web-console (13 of Fig. 2) on console host (12 of Fig. 2) by administrative staff.

In order to support such storage partition, first the console support software (5 of Fig. 2) of the server (3 of Fig. 2) must send storage information of the server (3 of Fig. 2) to the web-console (13 of Fig. 2) of console host (12 of Fig. 2). This including the storage device name, storage total size etc. Second, the administration staff on console host (12 of Fig. 2) can use web-console (13 of Fig. 2) to fill and to send the storage partition information to the console support software (5 of Fig. 2) of the server (3 of Fig. 2). The storage partition information includes the number of the partitions (volumes) and the size of each partition (volume). Third, upon receiving storage partition information from web-console (13 of Fig. 2) of console host (12 of Fig. 2), the console support software (5 of Fig. 2) of the server (3 of Fig. 2) performs the actual storage partition, which divides entire storage into multiple small volumes.

Finally, for each small storage volume, a corresponding file system could be built up.

- Assign storage volumes (Fig. 2):

Each storage volumes with its corresponding file system (11 of Fig. 2) of the storage (10 of Fig. 2) on server (3 of Fig. 2) needs to be exclusively assigned and exported to a given specific wireless device (1 of Fig. 2) by the console support software (5 of Fig. 2) on server (3 of Fig. 2).

- Data and storage volume management (Fig. 2)

- 1) With the support of console support software modules (5 of Fig. 2) of the server system (3 of Fig. 2), the user on web-browser (8 of Fig. 2) of wireless device (1 of Fig. 2) can setup the folder/directory structure on the file system of his/her assigned external storage volume (11 of Fig. 2). In addition, the user on web-browser (8 of Fig. 2) of wireless device (1 of Fig. 2) can perform all data management operations such as delete, copy, move, rename etc. on that file system.

In order to support such data management on external storage (10 of Fig. 2) from web-browser (8 of Fig. 2) of the wireless device (1 of Fig. 2), first the console support software modules (5 of Fig. 2) of the server system (3 of Fig. 2) must communicate with web-browser (8 of Fig. 2) of wireless device (1 of Fig. 2). Therefore, the user from web-browser (8 of Fig. 2) of wireless device (1 of Fig. 2) can choose desired data management operations and send operation information to console support software modules (5 of Fig. 2) of the server system (3 of Fig. 2). These operations include establishing folder/directory, copying, moving, or reaming data file etc. Second, upon receiving the data management operation, the console support software modules (5 of Fig. 2) of the server system (3 of Fig. 2) actually performs these operations on the assigned file system of assigned external storage volume (11 of Fig. 2) on the server system (3 of Fig. 2).

- Store data from wireless device into external storage (Fig. 2)

To store the data such as digital photo pictures, or messages into the assigned file system on external storage (10 of Fig. 2) of a server (3 of Fig. 2), the other software modules (9 of Fig. 2) of wireless device (1 of Fig. 2) need to send these data to other service modules (7 of Fig. 2) of server (3 of Fig. 2) via communication link between them. Upon receiving data, the other service modules (7 of Fig. 2) of server (3 of Fig. 2) write these data to assigned file system of the assigned storage volume (11 of Fig. 2) on server (3 of Fig. 2). The protocol used between these two communication entities could be either IP or non-IP based protocol.

- Download data from remote web server site into external storage (Fig. 3)

If the wireless device (1 of Fig. 3) user want to download data from remote web server (12 of Fig. 3) into assigned file system (11 of Fig. 3) of the external storage (10 of Fig. 3) on server (3 of Fig. 3), the following steps are required:

- 1) The user from web-browser (8 of Fig. 3) of a specific wireless device (1 of Fig. 3) accesses a remote download web server site (12 of Fig. 3) and obtain the information for download via path (a) of Fig. 3. For example, to get a web-page, which contains the data name for download.
- 2) The other software modules (9 of Fig. 3) of a specific wireless device (1 of Fig. 3) obtains download information, which becomes available in the cached web-pages on wireless device (1 of Fig. 3) after the web-browser (8 of Fig. 3) accessing the download site (12 of Fig. 3).
- 3) The other software modules (9 of Fig. 3) of a specific wireless device (1 of Fig. 3) send the obtained download information to other service modules (7 of Fig. 3) of storage server (3 of Fig. 3) via path (b) of Fig. 3.
- 4) Upon receiving the download information from a specific wireless device (1), the other service module (7 of Fig. 3) of the storage server (3 of Fig. 3) send a web download request to download web-site (12 of Fig. 3) via path (c) of Fig. 3 based on download information obtained. It then receives the download information data from web server of download web-site (12 of Fig. 3).
- 5) Upon receiving downloaded data, the other service modules (7 of Fig. 3) of the storage server (3 of Fig. 3) write these data for the specific wireless device (1 of Fig. 3) into the assigned file system (11 of Fig. 3) on the server (3 of Fig. 3).

- **Retrieve data from external storage of wireless device**

- 1) If a web-browser has embedded video or music functionality, the web-browser (8 of Fig.) of a wireless device (1 of Fig. 2) can be used to retrieve and play those multimedia data file such as video or music stored in wireless device's external storage volume (10 of Fig.2), which actually located on a server (3 of Fig. 2).
- 2) If there is needs, the other software module (9 of Fig. 2) of wireless device (1 of Fig. 2) also can retrieve data file from assigned file system of the assigned storage volume (11 of Fig. 2) on server (3 of Fig. 2).

- **Support external storage for large number of wireless devices**

If we need to provide each user 2GB of storage space, then a 160GB disk drive can support 80 users. A 4096GB (4 Tera Bytes) storage system on a server unit can support 2024 user. Each server only can efficiently support a limited size of the storage system. In order to support a large number of wireless devices with external storage such as 500,000 of them, a larger number of servers are required, in this case 250 servers is required. In order to let a larger number of the server to effectively support larger number of the wireless devices, an infrastructure like CCDSVM is desirable, which has been described in previous patents submission. With CCDSVM the control management station can control larger number of storage servers to provide external storage for huge number of the wireless devices.

2: What are Claimed:**Support a small number of wireless devices by a storage server**

- 1: The method of using storage of a server system as external storage of the wireless devices including following steps:
 - a) Partition the storage of a server system into multiple volumes, let each of them with suitable size, and establish a corresponding file system on top of it.
 - b) Export each storage volumes (file system) of a server system to a specific wireless device.
 - c) The user of wireless device could manage assigned external storage volume (file system) on a server and its data stored there.
 - d) The user could store the data of wireless device into the assigned external storage volume (file system) on server system.
 - e) The user of wireless device could download data directly from remote web-site into its assigned external storage (file system) on a server without goes through the wireless device itself.
 - f) The user of wireless device could retrieve and play multimedia data stored on external storage volume (file system) through web-browser of the wireless device.

- 2: The claim 1, wherein, step a) further includes
 - a) With supporting of console support software of the server, the server admin staff can perform partitioning the storage of the server from web-console on console host.
 - b) The server admin staff may also partition the storage of the server from the native user console on the server.

- 3: The claim 2, wherein, step a) further includes
 - a) The console support software of the server must send storage information of the server to the web-console of console host. This including the storage device name, storage total size etc.
 - b) The administration staff on console host can use web-console to fill and to send the storage partition information to the console support software of the server. The storage partition information includes the number of the partitions (volumes) and the size of each partition (volume).
 - c) Upon receiving storage partition information from web-console of console host, the console support software of the server performs the actual storage partition, which divides entire storage into multiple small volumes.
 - d) For each small storage volumes, a corresponding file system could be built on top of it.

- 4: The claim 1, wherein, step b) further includes
 - a) The console support software of the server must make association between each storage volumes (file system) of the server and each specific wireless devices in such way that permitting each storage volume be exclusively accessible to a web-browser of a specific wireless device.

- 5: The claim 1, wherein, step c) further includes
- a) With the support of console support software modules of the server system, the user from web-browser of wireless device can setup the folder/directory structure on his/her assigned external storage volume (file system), which located on the server.
 - b) With the support of console support software modules of the server system, the user from web-browser of wireless device can perform all data management operations such as delete, copy, move, rename etc. on his/her assigned external storage volume (file system), which located on the server.
- 6: The claim 5, wherein, step a) and b) further include
- a) The console support software modules of the server system must communicate with web-browser of wireless device in such way that the user from web-browser of wireless device can choose desired data management operations and send information of desired operation to console support software modules of the server system. These operation include creating, deleting folders/directories, copying, moving, or reaming data file etc.
 - b) Upon receiving the data management operation, the console support software modules of the server system actually performs these operations on a specific storage volume (file system) of the server system.
- 7: The claim 1, wherein, step d) further includes
- a) To store the data such as digital photo pictures, or messages from wireless device into the assigned external storage (file system) on a server, the other software modules of wireless device need to send these data to other service modules of the server via communication link between them.
 - b) Upon receiving data, the other service modules of the server write these data to the assigned storage volume (file system) of the server.
- 8: The claim 1, wherein, step e) further includes
If the wireless device user want to download data from remote web server into its assigned external storage on server, the following steps are required:
- a) The user from web-browser of a specific wireless device accesses a remote download web site and obtains the information for download via path between them. The information of downloading includes the data file name to be downloaded, the IP address of that download web site etc.
 - b) The other software modules of a specific wireless device obtain download information, which becomes available in the cached web pages on wireless device after the web-browser accessing the download site.
 - c) The other software modules of a specific wireless device send the obtained download information to other service modules of external storage server via path between them.
 - d) Upon receiving the download information from a given specific wireless device, the other service modules of the external storage server send a web download request to download web-site via path between them based on download information obtained and then receives the download data from download web-

site. The HTTP protocol can be used for sending and receiving such information between other service modules of the external storage server and the web server of the remote download web-site.

- e) Upon receiving downloaded data, the other service modules of the external storage server write these data into assigned storage volume (file system) for that given specific wireless device.
- 9: The claim 1, wherein, step f) further includes
- a) The user from web-browser of wireless device can browse the files/folders stored in its assigned external storage volume (file system) on a server system.
 - b) If a web-browser capable to invoke the embedded video or audio functionality, the user from web-browser of wireless device can play the video or audio multimedia data, which stored on wireless' external storage volume (file system) located on a server.

Support external storage for larger number of wireless devices

- 10: To support huge number of wireless devices, the CCDSVM infrastructure can be deployed, with which a larger number of storage servers can be organized to provide external storage for wireless devices while each storage server can support a fix number of wireless device to its capacity limits.

Abstraction

In order to solve the wireless device's limited storage problem, the wireless device can use the storage of a server as their external storage. To effectively let the storage server providing external storage (file system) for wireless device, the storage of a server need to be partitioned into multiple small storage volumes, which also need to be exported to each specific wireless device. With the supporting of console support software module of the server, the user from web-browser of a wireless device can manage the assigned external storage volume on a server such as create delete directory/folder, move, copy, delete, rename files etc.. The data on the wireless device can be stored into this external storage. The user from the web-browser also can perform download data from a remote web-site to his/her assigned private external storage on a server. In addition, if a web-browser of wireless device support the embedded video or music, the user from the web-browser of a wireless device can access and play the multimedia data, which stored on external storage of the wireless device. Finally, to support huge number of wireless devices with external storage, the CCDSVM infrastructure can be deployed. The larger number of server units controlled by a central control station can provide huge amount of storage volumes for huge amount of wireless devices.

Wireless devices supports in a simple environment

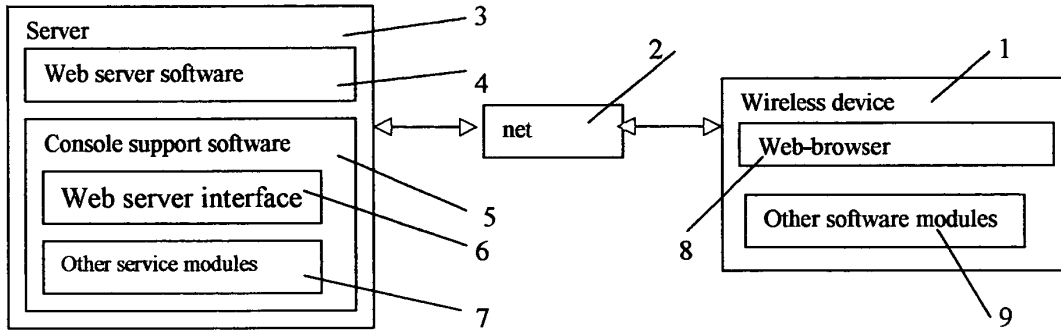


Fig. 1

Wireless devices access external storage through web browser

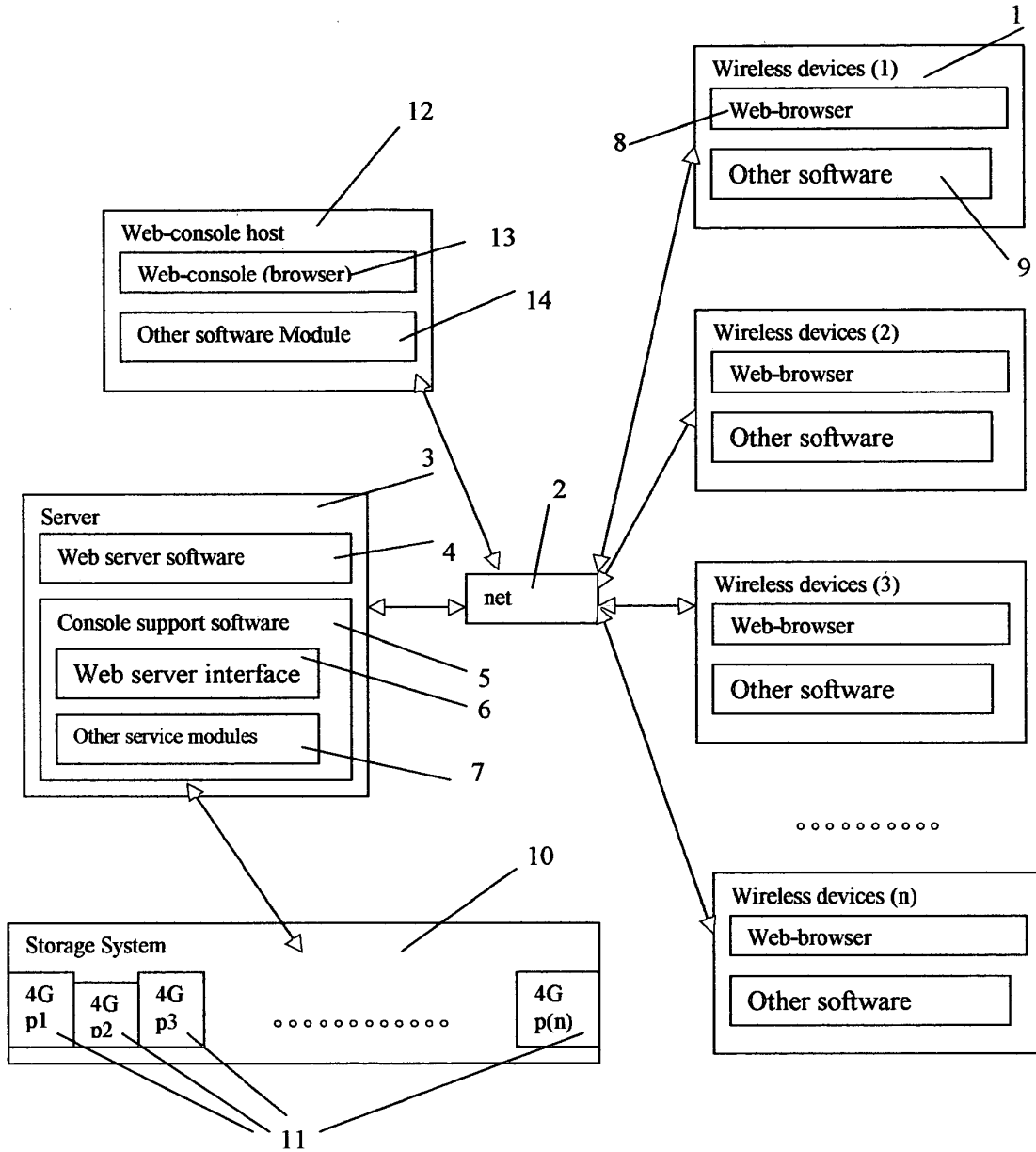


Fig. 2

Wireless out-band download

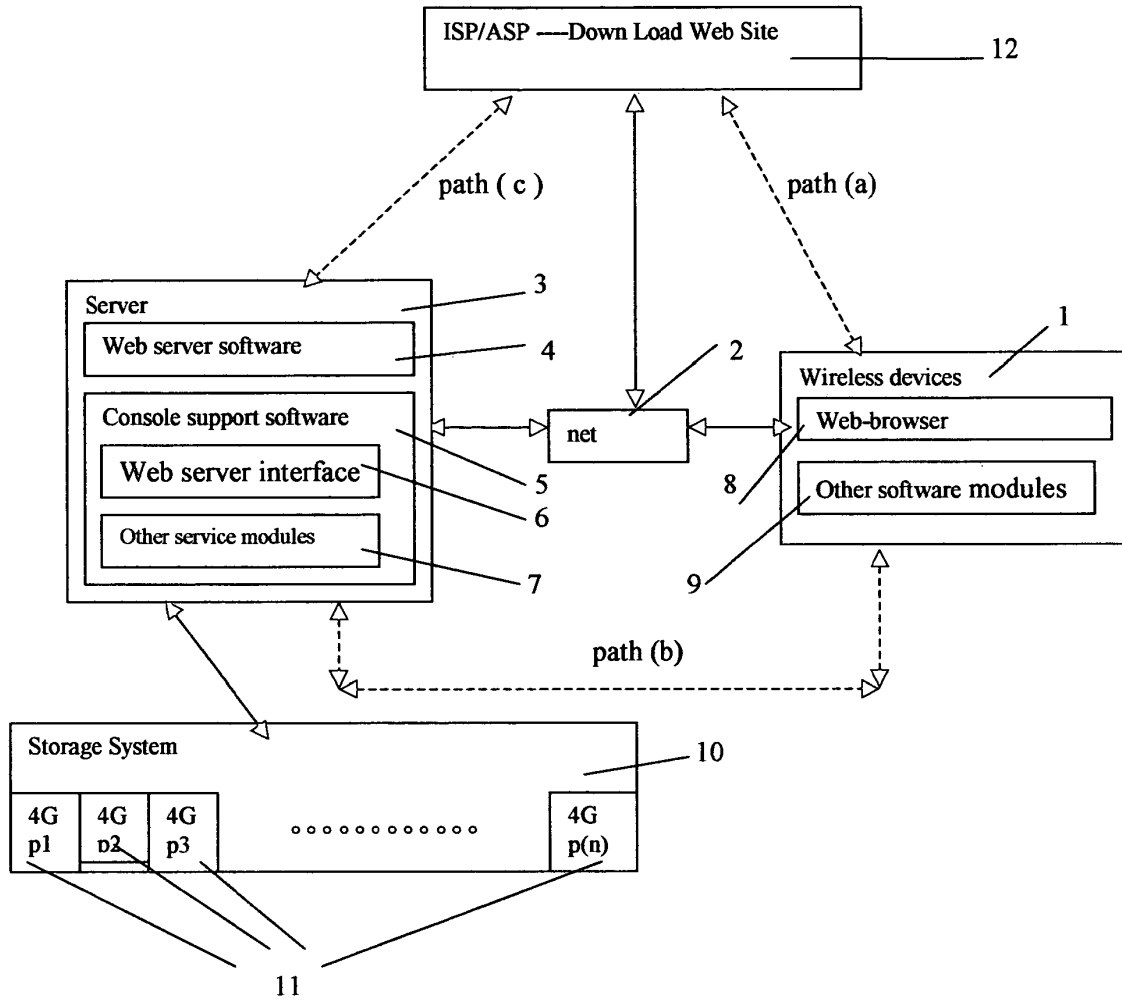


Fig. 3

The CCDSVM Support External Device for Huge Number of Wireless Device

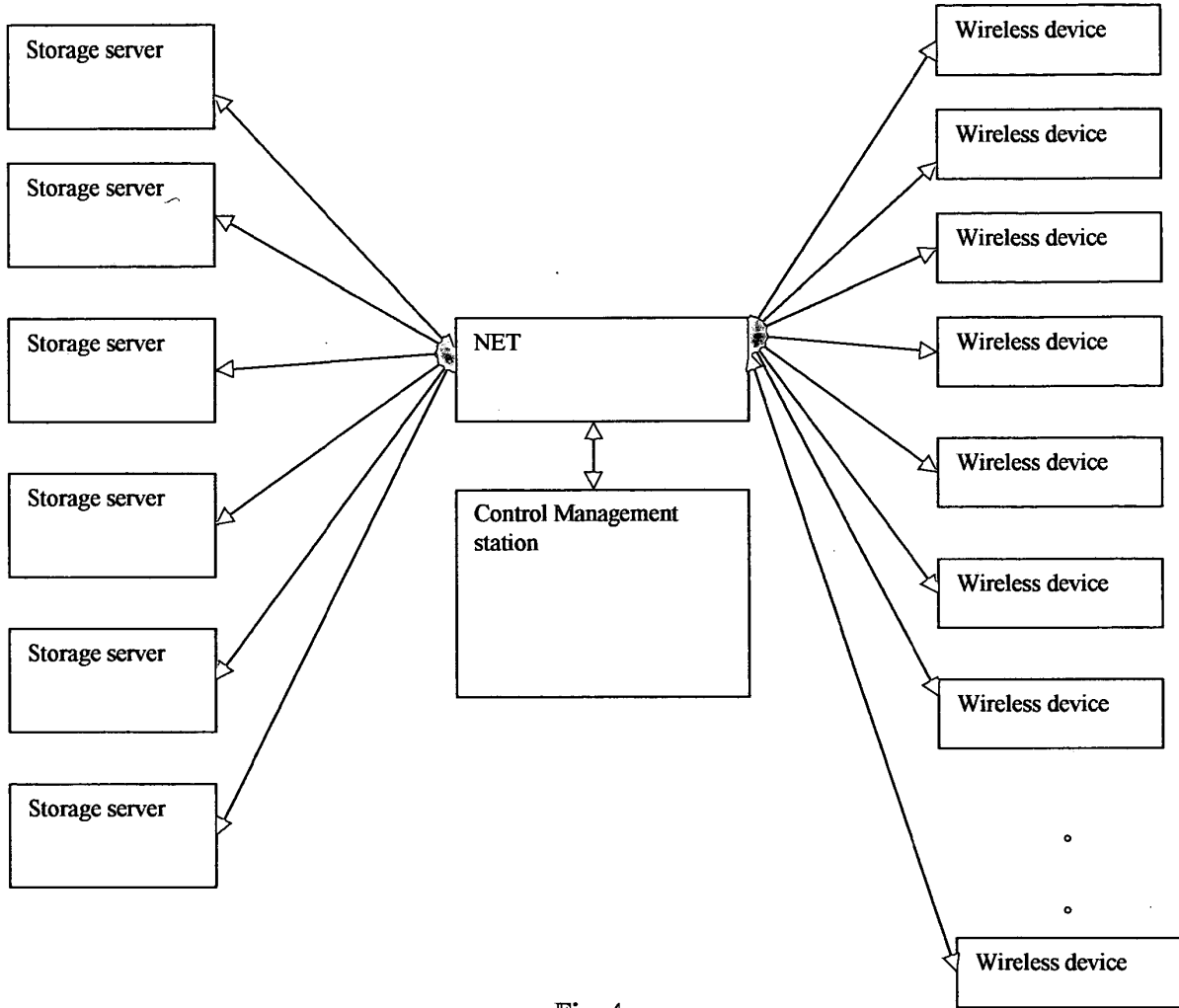


Fig. 4

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	
		Application Number	
Title of Invention	System And Method For Support Wireless Device Access To External Storage		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2

<input type="checkbox"/>	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2. (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
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Inventor Information:

Inventor 1					<input type="button" value="Remove"/>
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Sheng	Tai	Tsao		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Fremont	State/Province	CA	Country of Residence i	US
Mailing Address of Inventor:					
Address 1	3906 Borgo Common				
Address 2					
City	Fremont	State/Province	CA		
Postal Code	94538	Country i	US		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.					<input type="button" value="Add"/>

Correspondence Information:

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<input type="checkbox"/> An Address is being provided for the correspondence information of this application.			
Customer Number	77501		
Email Address	ted.tsao@sttwebos.com	<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>

Application Information:

Title of the Invention	System And Method For Support Wireless Device Access To External Storage		
Attorney Docket Number		Small Entity Status Claimed	<input checked="" type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	4	Suggested Figure for Publication (if any)	

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	
		Application Number	
Title of Invention	System And Method For Support Wireless Device Access To External Storage		

Publication Information:
 Request Early Publication (Fee required at time of Request 37 CFR 1.219)

 Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.
Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	77501		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

Prior Application Status	Pending	<input type="button" value="Remove"/>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	10726897	2003-12-04
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			<input type="button" value="Add"/>

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

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Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	
		Application Number	
Title of Invention	System And Method For Support Wireless Device Access To External Storage		

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

Authorization to Permit Access to the Instant Application by the Participating Offices

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	
	Application Number	
Title of Invention	System And Method For Support Wireless Device Access To External Storage	

Applicant 1	<input type="button" value="Remove"/>
<p>If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.</p>	
<input type="button" value="Clear"/>	
<input checked="" type="radio"/> Assignee	<input type="radio"/> Legal Representative under 35 U.S.C. 117
<input type="radio"/> Person to whom the inventor is obligated to assign.	<input type="radio"/> Person who shows sufficient proprietary interest
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:	
Name of the Deceased or Legally Incapacitated Inventor : <input type="text"/>	
If the Applicant is an Organization check here. <input type="checkbox"/>	

Prefix	Given Name	Middle Name	Family Name	Suffix
	Sheng	Tai (Ted)	Tsao	

Mailing Address Information:				
Address 1	3906 Borgo Common			
Address 2				
City	Fremont	State/Province	CA	
Country ⁱ	US	Postal Code	94538	
Phone Number	4088130536 5105808592	Fax Number		
Email Address	ted.tsao@sttwebos.com			

Additional Applicant Data may be generated within this form by selecting the Add button.	<input type="button" value="Add"/>
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Assignee Information including Non-Applicant Assignee Information:

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Assignee 1	<input type="button" value="Remove"/>
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	
		Application Number	
Title of Invention	System And Method For Support Wireless Device Access To External Storage		

If the Assignee is an Organization check here.

Prefix	Given Name	Middle Name	Family Name	Suffix
	Sheng	Tai (Ted)	Tsao	

Mailing Address Information:

Address 1	3906 Borgo Common		
Address 2			
City	Fremont	State/Province	CA
Country i	US	Postal Code	94538
Phone Number	4088130536 5105808592	Fax Number	
Email Address	ted.tsao@sttwebos.com		

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Signature:

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Signature	/shengtai tsao/			Date (YYYY-MM-DD)	2013-11-14
First Name	Sheng	Last Name	Tsao	Registration Number	
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Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	System And Method For Support Wireless Device Access To External Storage			
First Named Inventor/Applicant Name:	Sheng Tai (Ted) Tsao			
Filer:	Sheng Tai Tsao			
Attorney Docket Number:				
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				730

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EFS ID:	17400802
Application Number:	14079831
International Application Number:	
Confirmation Number:	9132
Title of Invention:	System And Method For Support Wireless Device Access To External Storage
First Named Inventor/Applicant Name:	Sheng Tai (Ted) Tsao
Customer Number:	77501
Filer:	Sheng Tai Tsao
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	14-NOV-2013
Filing Date:	
Time Stamp:	12:59:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

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Payment Type	Credit Card
Payment was successfully received in RAM	\$730
RAM confirmation Number	13309
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1	Transmittal of New Application	CON897-transmittle.pdf	276721	no	2
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Warnings:					
Information:					
2	Oath or Declaration filed	CON897-decl.pdf	173282	no	2
			b2f0fc0a1bc92a7764309dda673fdf72fda480fa		
Warnings:					
Information:					
3	Claims	CON897-claims.pdf	88873	no	7
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Warnings:					
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5	Application Data Sheet	CON897-ADS.pdf	1509428	no	6
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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.

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