



US009239686B2

(12) **United States Patent**
Tsao

(10) **Patent No.:** **US 9,239,686 B2**
(45) **Date of Patent:** ***Jan. 19, 2016**

(54) **METHOD AND APPARATUS FOR WIRELESS DEVICES ACCESS TO EXTERNAL STORAGE**

(56) **References Cited**

U.S. PATENT DOCUMENTS

(71) Applicant: **Sheng Tai (Ted) Tsao**, Fremont, CA (US)
(72) Inventor: **Sheng Tai (Ted) Tsao**, Fremont, CA (US)
(73) Assignee: **Sheng Tai (Ted) Tsao**, Fremont, CA (US)
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 179 days.
This patent is subject to a terminal disclaimer.

6,754,710	B1 *	6/2004	McAlear	709/227
6,839,743	B2 *	1/2005	Shim	G06F 17/3089
				707/E17.116
6,968,334	B2 *	11/2005	Salmenkaita et al.	707/10
7,286,651	B1 *	10/2007	Packingham et al.	379/88.14
7,707,065	B1 *	4/2010	Kangas	705/26.1
8,059,818	B2 *	11/2011	Asokan et al.	380/277
8,229,856	B1 *	7/2012	Reddick	G06Q 30/04
				705/50
2002/0133597	A1 *	9/2002	Jhingan et al.	709/228
2002/0173295	A1 *	11/2002	Nykanen et al.	455/414
2003/0072031	A1 *	4/2003	Kuwata et al.	358/1.15
2004/0176958	A1 *	9/2004	Salmenkaita et al.	704/275
2004/0186750	A1 *	9/2004	Surbey et al.	705/4
2005/0193199	A1 *	9/2005	Asokan et al.	713/168
2006/0036610	A1 *	2/2006	Wang	707/10
2006/0168123	A1 *	7/2006	Krstulich	H04L 63/083
				709/219
2008/0059519	A1 *	3/2008	Griffith	H04L 67/06
2008/0208870	A1 *	8/2008	Tsang	G06F 17/30165
2010/0211651	A1 *	8/2010	Guedalia et al.	709/217
2010/0325709	A1 *	12/2010	Kawase	H04N 7/16
				726/7
2012/0124370	A1 *	5/2012	Choi et al.	713/159
2014/0208399	A1 *	7/2014	Ponzio, Jr.	726/4

* cited by examiner

(21) Appl. No.: **14/036,744**

(22) Filed: **Sep. 25, 2013**

(65) **Prior Publication Data**

US 2015/0089181 A1 Mar. 26, 2015

Related U.S. Application Data

(63) Continuation of application No. 10/726,897, filed on Dec. 4, 2003, now Pat. No. 8,606,880.

(51) **Int. Cl.**
G06F 13/00 (2006.01)
G06F 3/06 (2006.01)

(52) **U.S. Cl.**
CPC **G06F 3/0631** (2013.01); **G06F 3/0604** (2013.01); **G06F 3/067** (2013.01); **G06F 2003/0697** (2013.01)

(58) **Field of Classification Search**
CPC G06F 3/067; G06F 3/0604; G06F 3/0631; G06F 2003/0697
USPC 711/111, 114, 147, 171; 709/219, 226; 707/795, 802

See application file for complete search history.

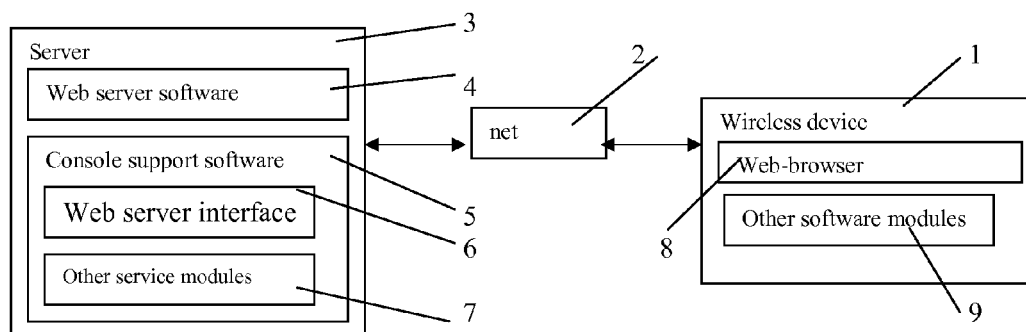
Primary Examiner — Reba I Elmore

(57) **ABSTRACT**

Traditionally, wireless device, such as cell phone or personal data assistant device (PDA), has relatively smaller storage capacity. Therefore, it is quite often that a user of the wireless device has difficulty to find more storage space for storing ever increased personal data, such as storing multiple Gig bytes of multimedia data including digital video, music, or photo picture etc. Instant application disclosed a system and method for a storage system providing storage service to the wireless device for the wireless device remotely storing personal data into an external storage space allocated exclusively to a user of the wireless device by the storage system.

20 Claims, 4 Drawing Sheets

Wireless devices supports in a simple environment



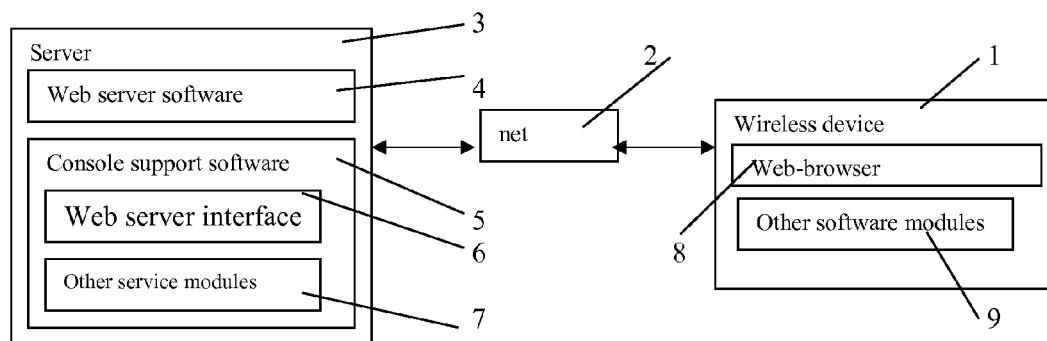
Wireless devices supports in a simple environment

Fig. 1

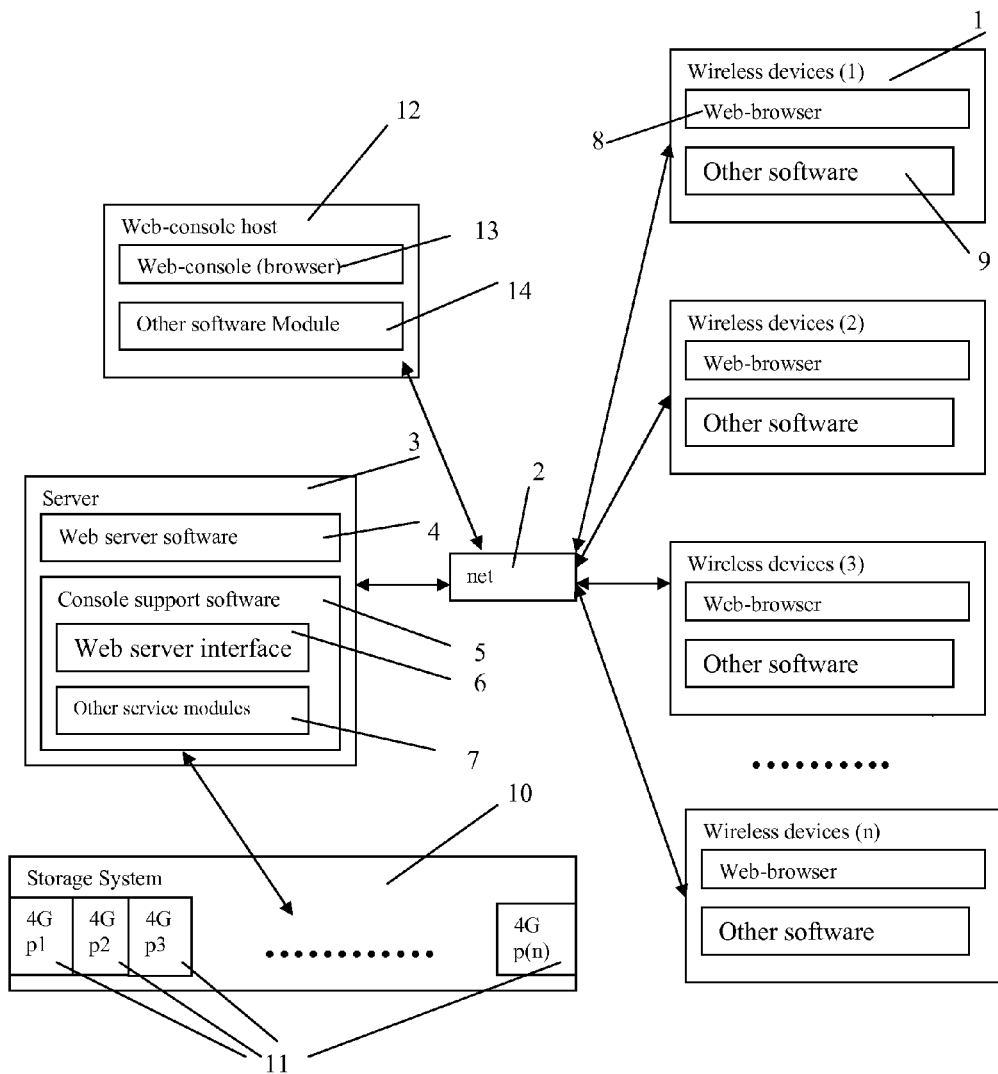
Wireless devices access external storage through web browser

Fig. 2

Wireless out-band download

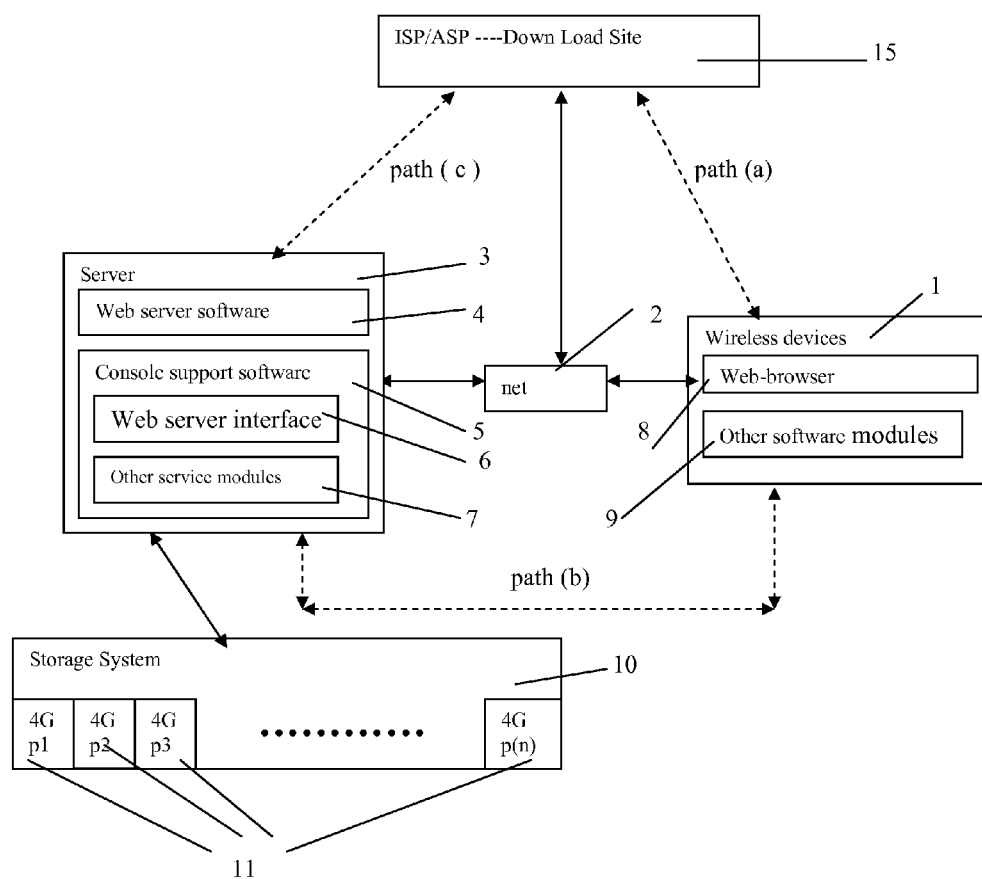


Fig. 3

The CCDSVM Support External Device for Huge Number of Wireless Device

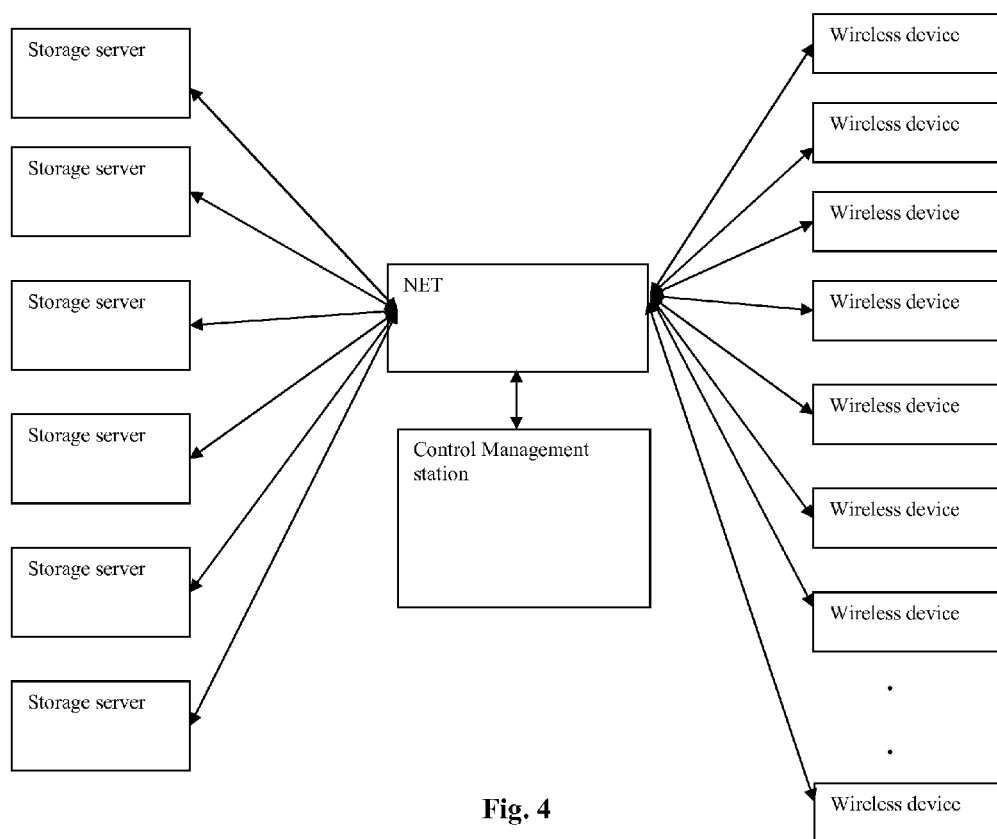


Fig. 4

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.