



US 20190174554A1

(19) **United States**  
 (12) **Patent Application Publication** (10) **Pub. No.: US 2019/0174554 A1**  
 DEENOO et al. (43) **Pub. Date: Jun. 6, 2019**

(54) **DISTRIBUTED CONTROL IN WIRELESS SYSTEMS**  
 (71) Applicant: **Sony Corporation**, Tokyo (JP)  
 (72) Inventors: **Yugeswar DEENOO**, Conshohocken, PA (US); **Ghyslain PELLETIER**, Montreal (CA); **Ping Hsuan TAN**, Montreal (CA); **Martino M FREDA**, Montreal (CA)

*H04W 56/00* (2006.01)  
*H04B 7/06* (2006.01)  
*H04B 7/0408* (2006.01)  
*H04W 76/27* (2006.01)  
*H04W 76/11* (2006.01)  
*H04W 8/22* (2006.01)  
*H04W 16/14* (2006.01)  
 (52) **U.S. Cl.**  
 CPC ..... *H04W 74/0841* (2013.01); *H04L 5/0098* (2013.01); *H04L 5/0048* (2013.01); *H04W 80/02* (2013.01); *H04W 68/005* (2013.01); *H04W 72/0453* (2013.01); *H04W 16/14* (2013.01); *H04B 7/0617* (2013.01); *H04B 7/0408* (2013.01); *H04W 76/27* (2018.02); *H04W 76/11* (2018.02); *H04W 8/22* (2013.01); *H04W 56/001* (2013.01)

(73) Assignee: **Sony Corporation**, Tokyo (JP)  
 (21) Appl. No.: **16/099,390**  
 (22) PCT Filed: **May 11, 2017**  
 (86) PCT No.: **PCT/US2017/032069**  
 § 371 (c)(1),  
 (2) Date: **Nov. 6, 2018**

**Related U.S. Application Data**

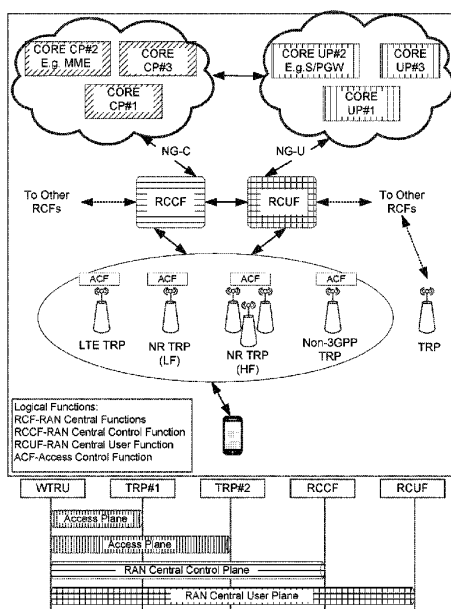
(60) Provisional application No. 62/334,704, filed on May 11, 2016, provisional application No. 62/400,810, filed on Sep. 28, 2016, provisional application No. 62/416,499, filed on Nov. 2, 2016, provisional application No. 62/442,317, filed on Jan. 4, 2017.

**Publication Classification**

(51) **Int. Cl.**  
*H04W 74/08* (2006.01)  
*H04L 5/00* (2006.01)  
*H04W 80/02* (2006.01)  
*H04W 68/00* (2006.01)  
*H04W 72/04* (2006.01)

(57) **ABSTRACT**

Systems, procedures, and instrumentalities are disclosed for distributed control in wireless systems, such as 5G flexible radio access technology (RAT) (5gFLEX). Example procedures are provided for WTRU and network operation associated with a distributed control plane architecture, connectionless data transfer and dedicated system information acquisition. Distributed control may be provided, for example, by replicating a plurality of access control functions (ACFs) using a plurality of instances in a plurality of different transmission/reception points (TRPs) with multi-connectivity. The plurality of TRPs may concurrently provide control services to a WTRU. Centralized control functions may manage core network connectivity and/or a plurality of user plane instances for the WTRU and/or may facilitate coordination between the plurality of ACF instances for the WTRU in the plurality of different TRPs of the WTRU's configuration.



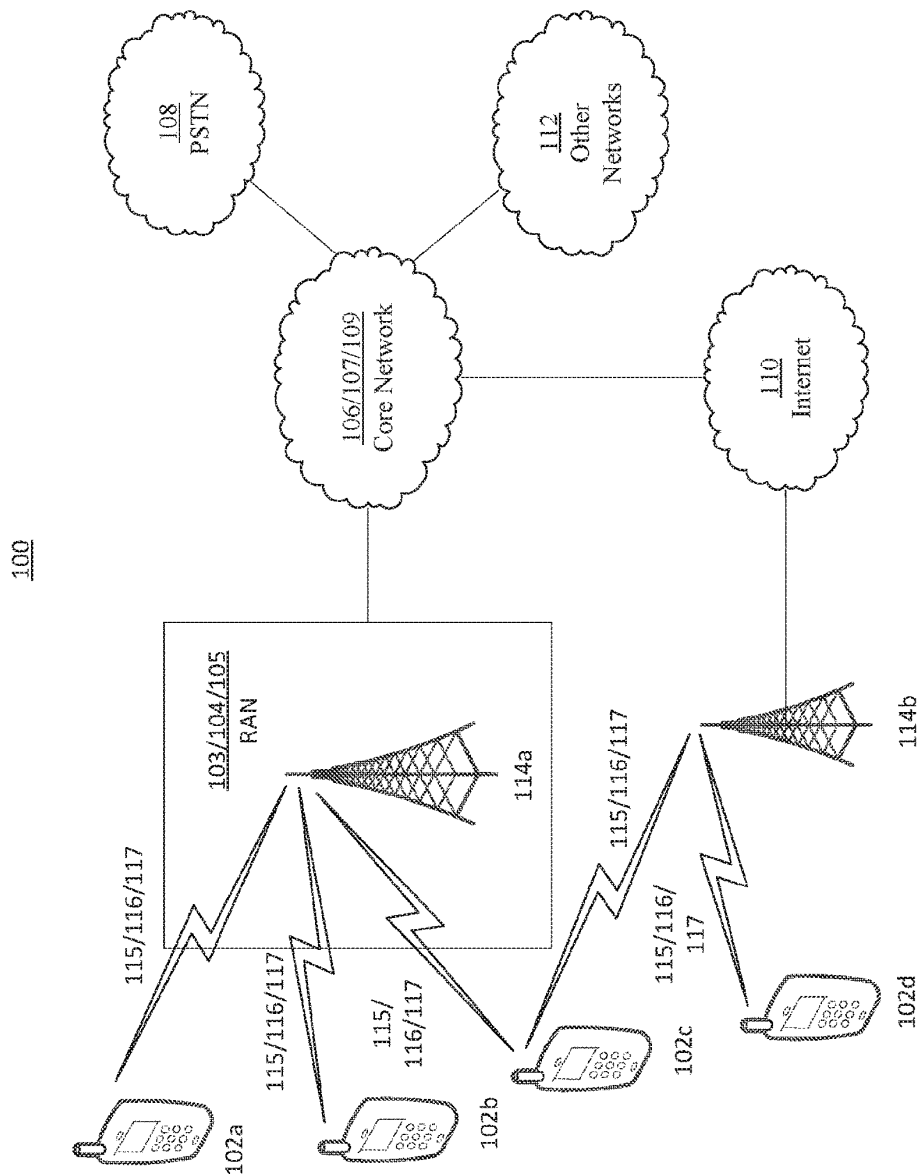


FIG. 1A

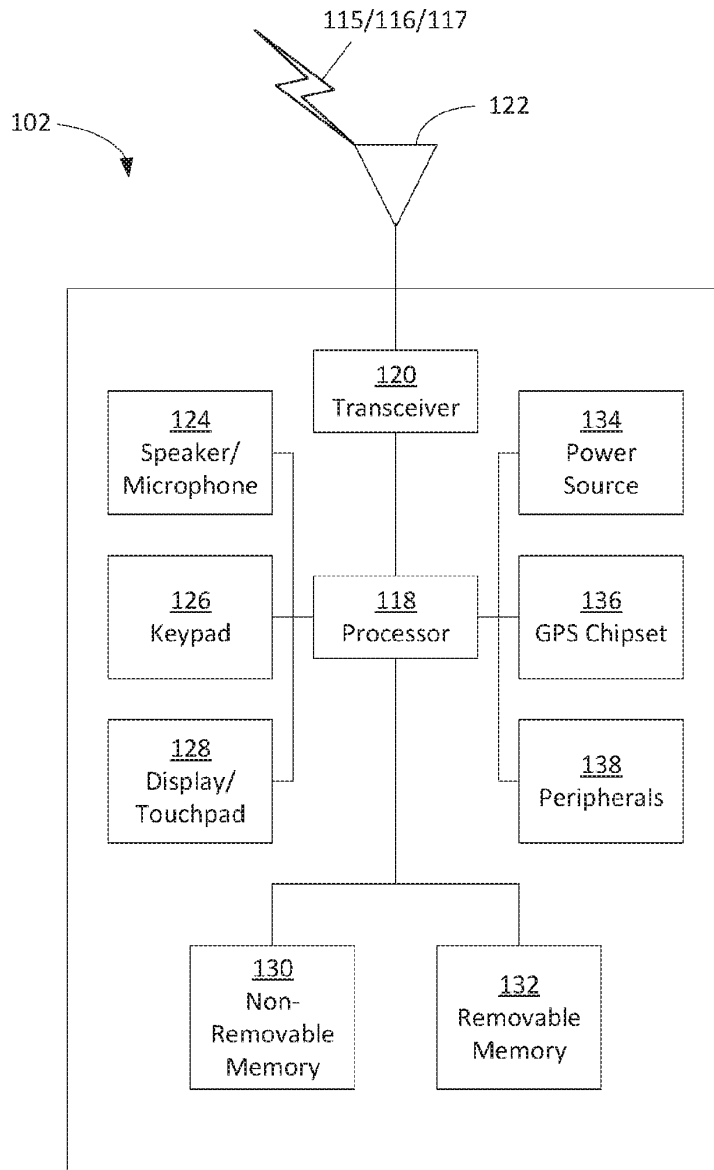


FIG. 1B

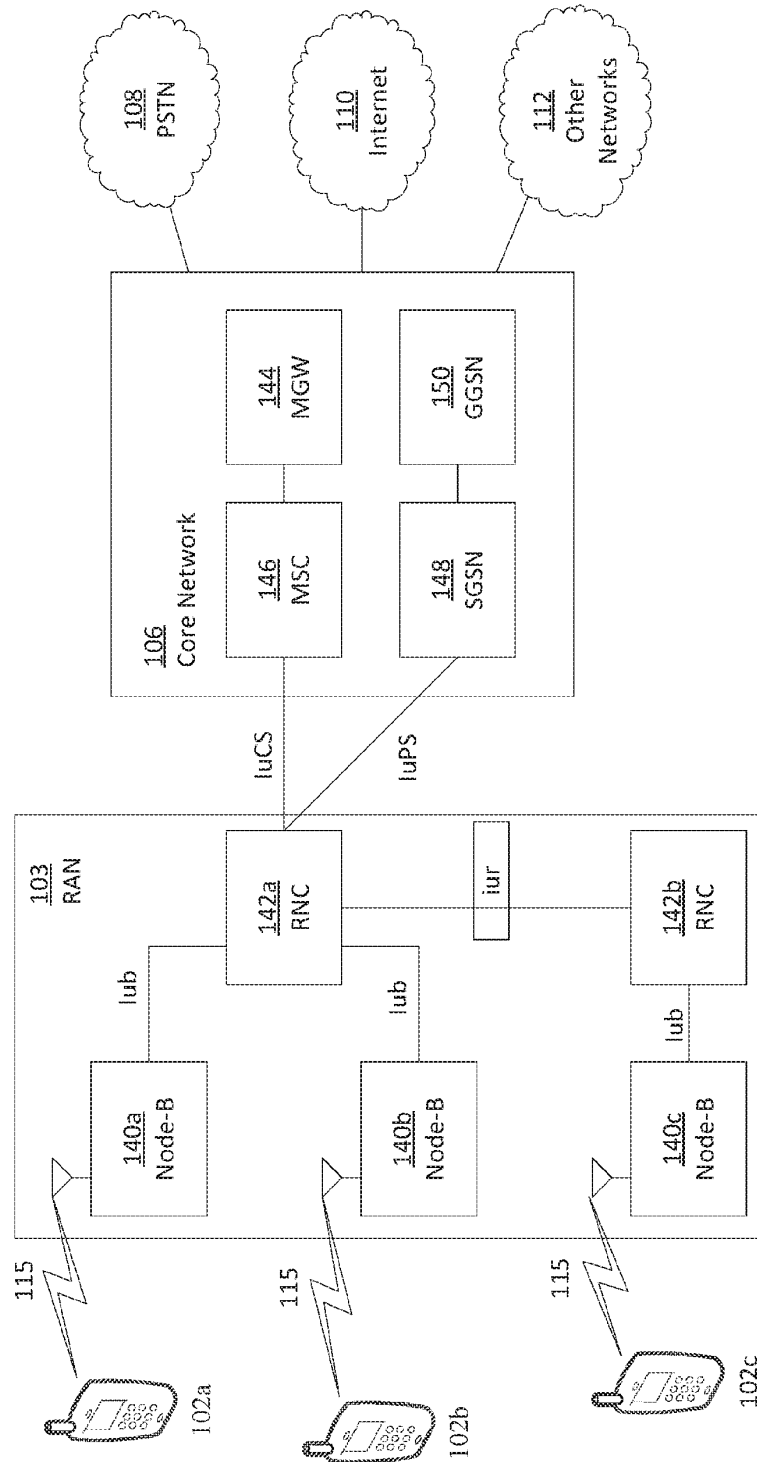


FIG. 1C

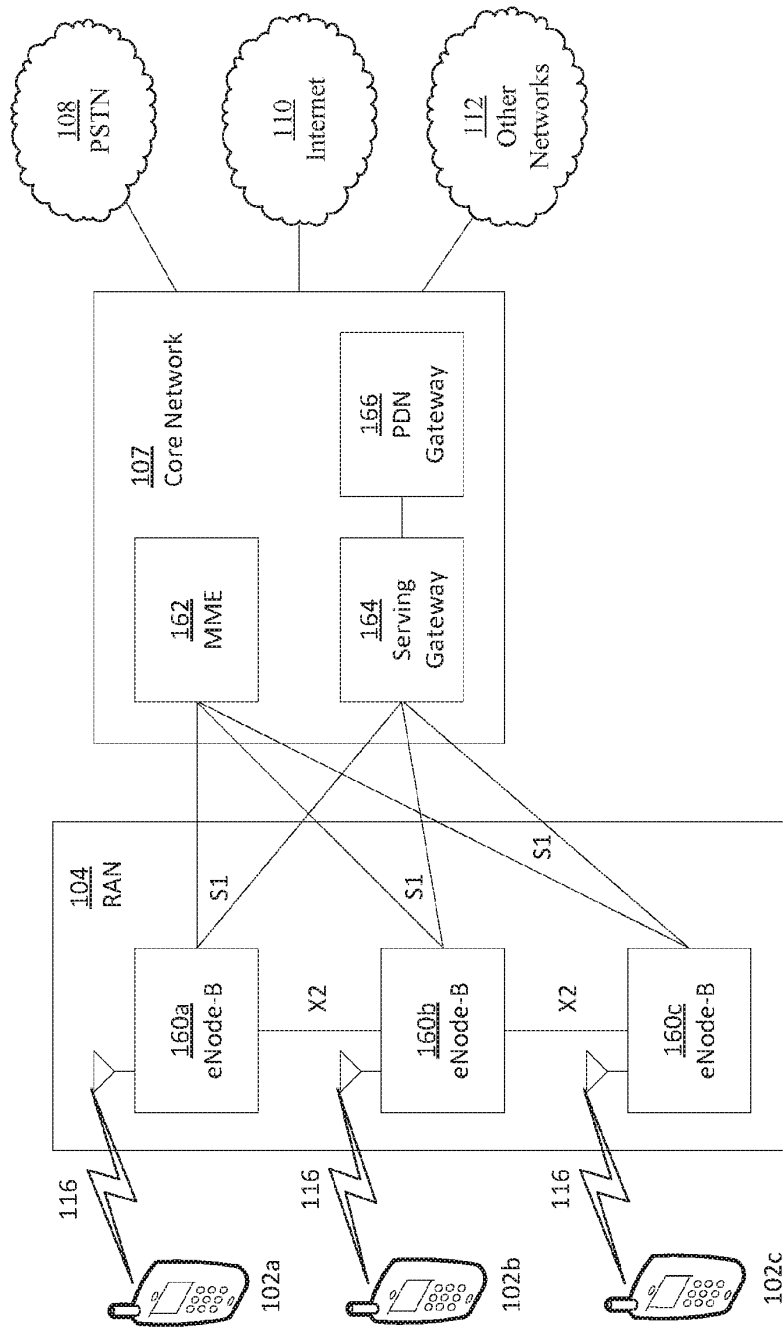


FIG. 1D

# 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.