



US006255800B1

(12) **United States Patent**
Bork

(10) **Patent No.:** **US 6,255,800 B1**
(45) **Date of Patent:** **Jul. 3, 2001**

(54) **BLUETOOTH ENABLED MOBILE DEVICE CHARGING CRADLE AND SYSTEM**

(75) Inventor: **Stephan Bork**, Richardson, TX (US)

(73) Assignee: **Texas Instruments Incorporated**,
Dallas, TX (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/476,986**

(22) Filed: **Jan. 3, 2000**

(51) Int. Cl.⁷ **H02J 7/00**

(52) U.S. Cl. **320/115; 455/463**

(58) Field of Search 320/115; 455/463,
455/557, 466, 404

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 5,892,949 * 3/1999 Noble 717/4
- 6,023,241 * 11/1998 Clapper 342/357.13
- 6,028,764 * 3/1999 Richardson et al. 361/681

OTHER PUBLICATIONS

- “Specification of the Bluetooth System”, Specification vol. 1, The ad hoc Scatternet for affordable and highly functional wireless connectivity, Core, v1.OA, 7/99.
- “WinHec '99 White Paper”, Windows® Hardware Engineering Conference: Advancing the Platform, Bluetooth Radio System Overview, 4/99, 19 pages.

* cited by examiner

Primary Examiner—Peter S. Wong

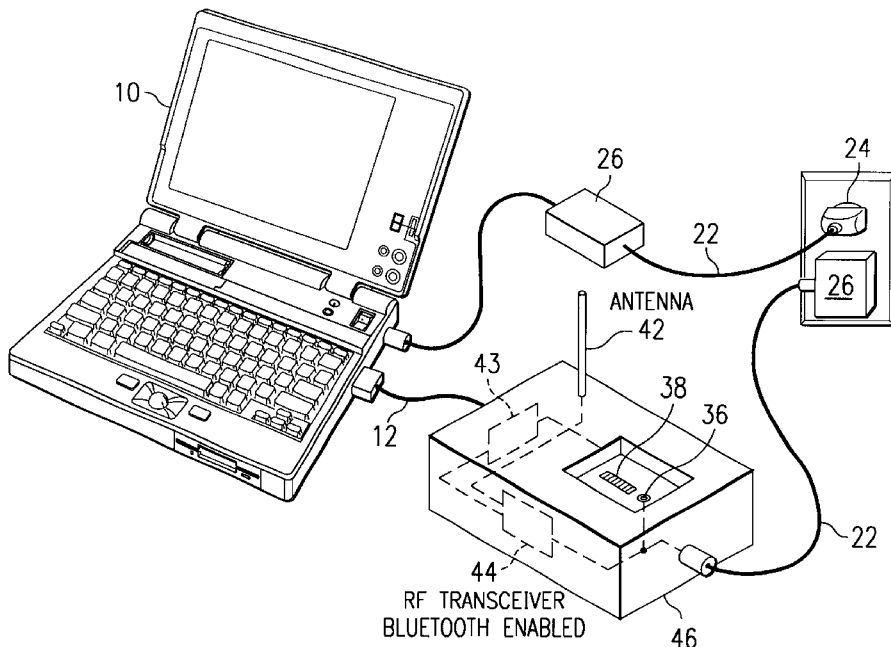
Assistant Examiner—Pia Tibbits

(74) *Attorney, Agent, or Firm*—Ronald O. Neerings; Wade James Brady, III; Frederick J. Telecky, Jr.

(57) **ABSTRACT**

A mobile device charging cradle (46) to enable short distance wireless communication between a personal computer (10) and at least one other short distance wireless communication enabled electronic device (50). In a preferred embodiment of the invention, a short distance wireless radio (transceiver—Bluetooth enabled) (44) and antenna (42) are added to a charging cradle to produce a combination charging and short distance wireless communication enabled cradle (46) which is coupled via a data cable (12) to a personal computer (10). The short distance wireless (in this case RF) communication enabled cradle enables a system in which a legacy architecture personal computer may communicate with other short distance RF communication enabled electronic devices. Such communication is enabled whether or not another RF communication enabled portable electronic device is coupled to the cradle. In another embodiment of the invention, a universal serial bus USB in a computer is used as a power source for the previously described cradle. In one embodiment, a data/power cable (78) couples a computer (70) having an external USB connector (72) to the short distance wireless communication enabled cradle (74). The cable includes electronic circuitry (82) for converting the voltage level supplied by the USB to a voltage level usable by the cradle—including its Bluetooth radio (44) and any peripheral electronic device that may be coupled to the cradle (52,54).

30 Claims, 13 Drawing Sheets



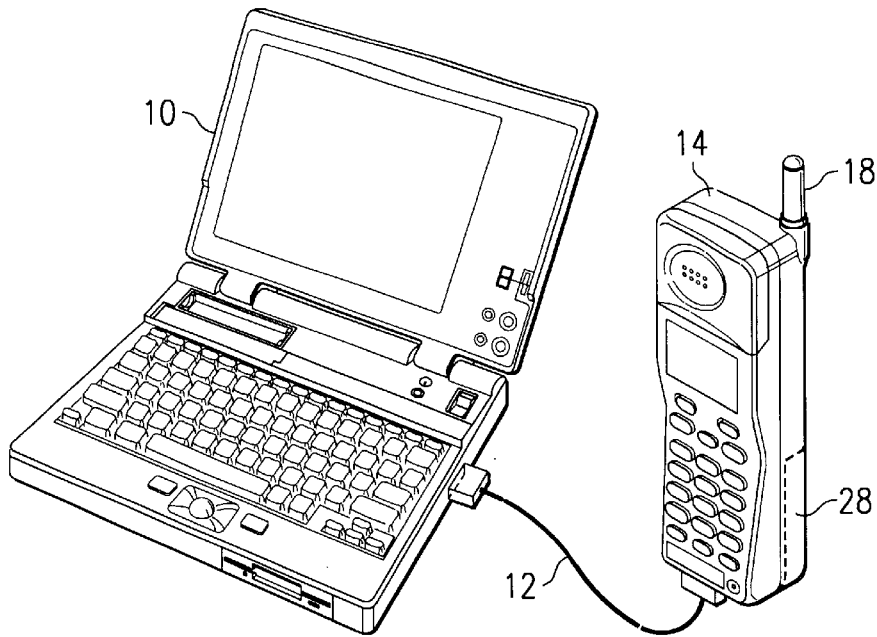


FIG. 1
(PRIOR ART)

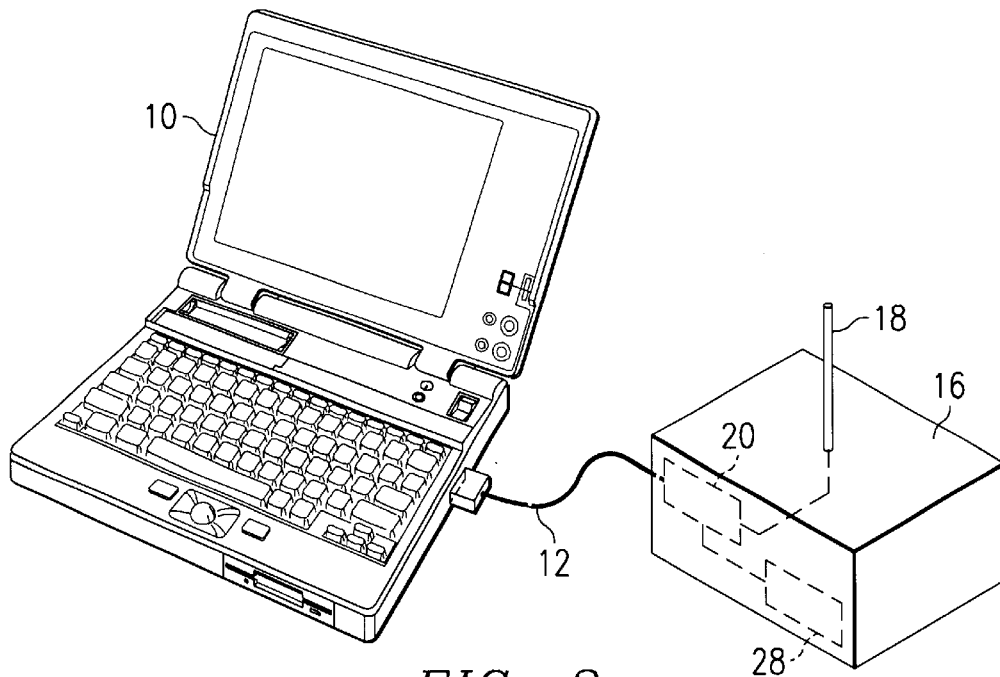


FIG. 2
(PRIOR ART)

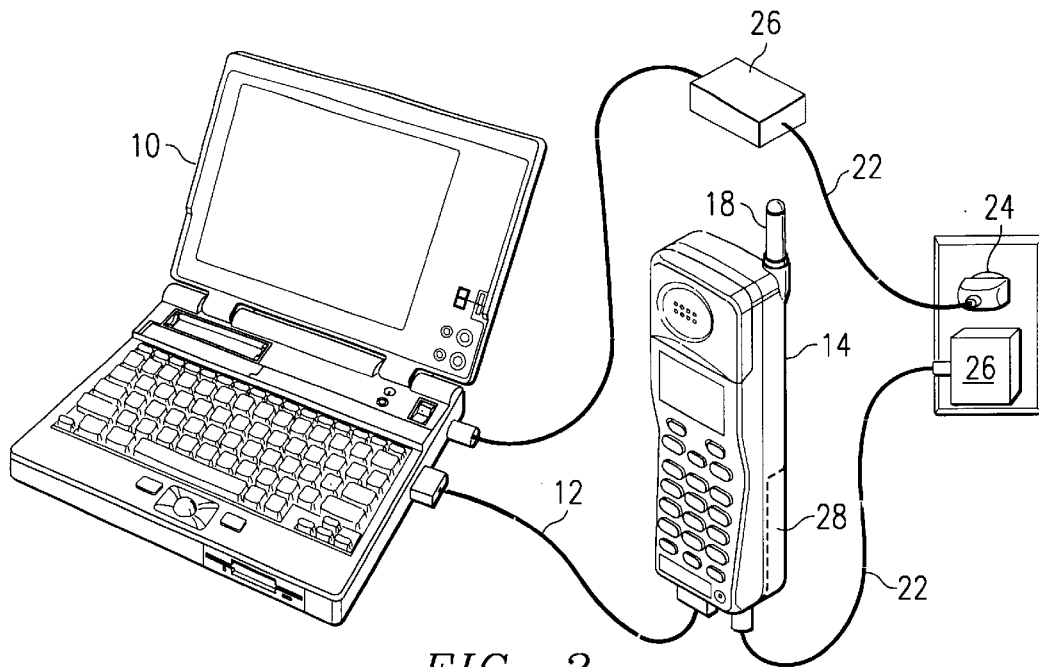


FIG. 3
(PRIOR ART)

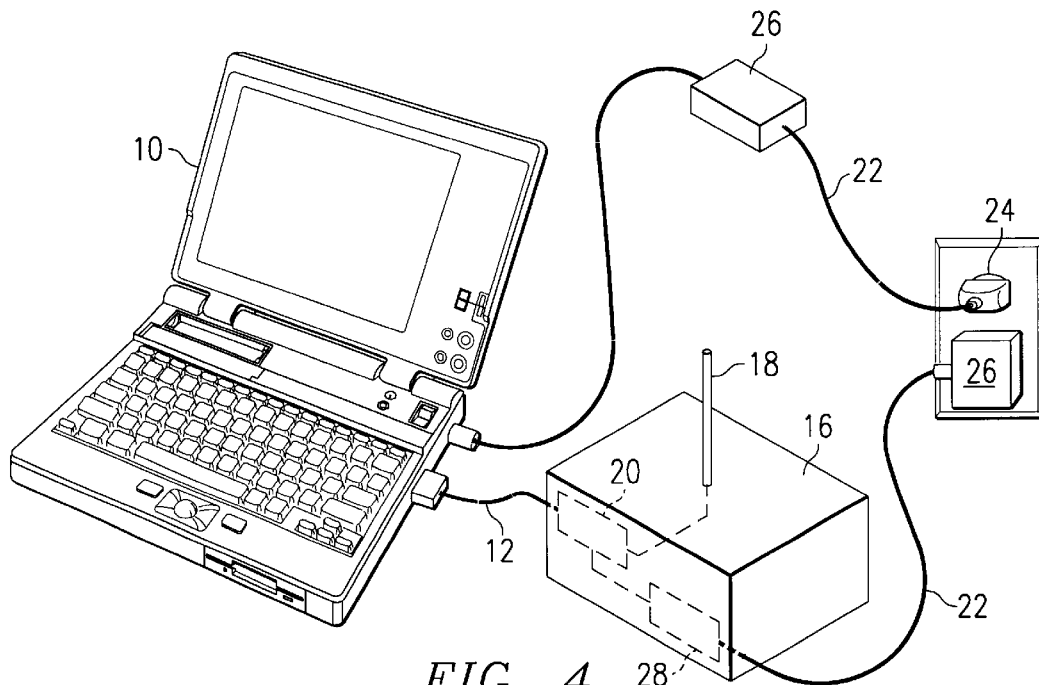


FIG. 4
(PRIOR ART)

FIG. 5
(PRIOR ART)

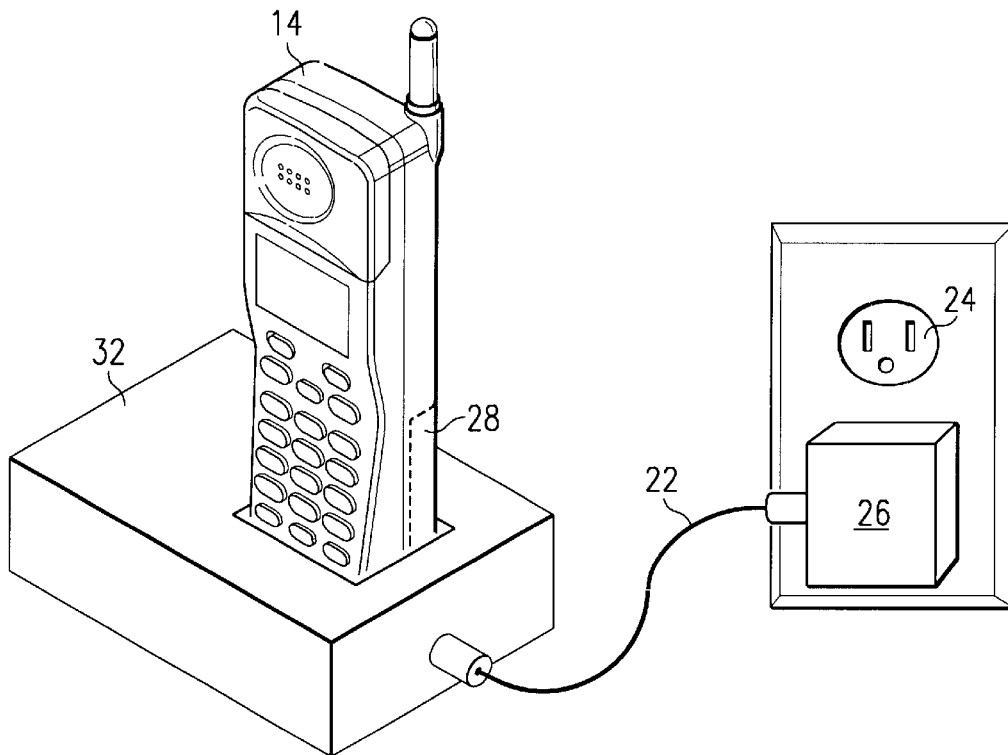
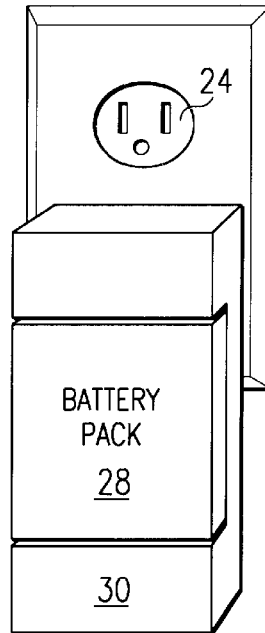


FIG. 6
(PRIOR ART)

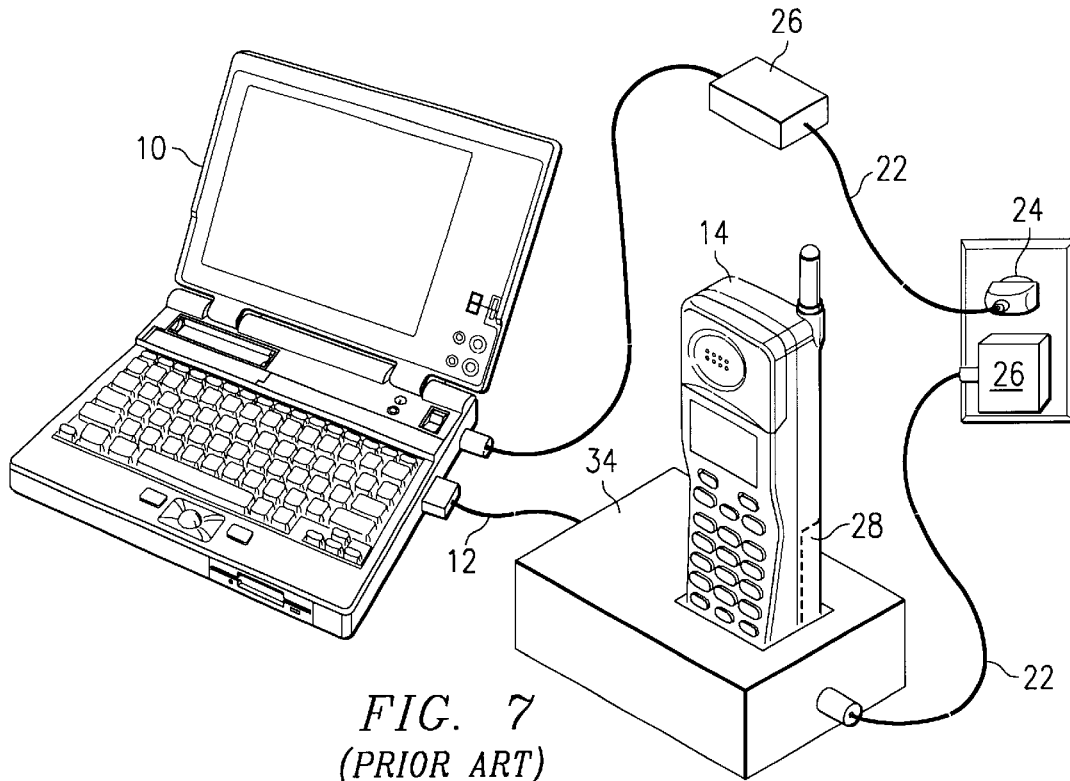


FIG. 7
(PRIOR ART)

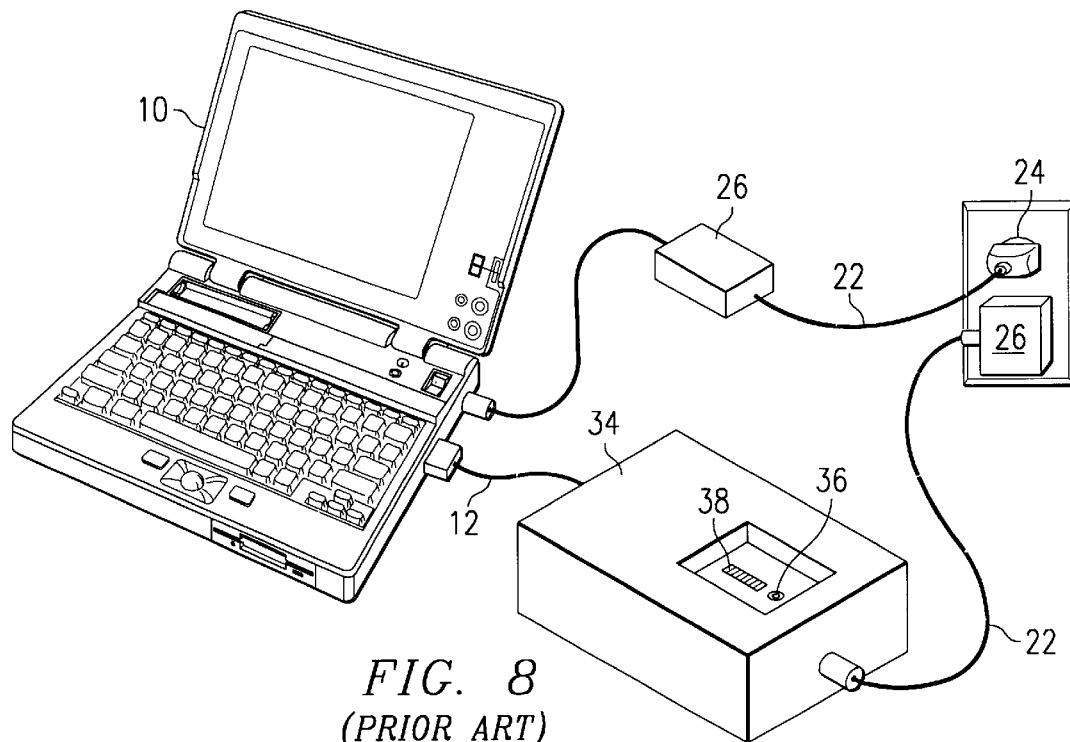


FIG. 8
(PRIOR ART)

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.