



US008297518B2

(12) **United States Patent**
Yamazaki et al.

(10) **Patent No.:** **US 8,297,518 B2**
(45) **Date of Patent:** **Oct. 30, 2012**

(54) **PAPER MONEY, COIN, VALUABLE INSTRUMENT, CERTIFICATES, TAG, LABEL, CARD, PACKING CONTAINERS, DOCUMENTS, RESPECTIVELY INSTALLED WITH INTEGRATED CIRCUIT**

6,317,721 B1	11/2001	Hurta et al.
6,488,204 B1	12/2002	Morooka et al.
6,694,436 B1	2/2004	Audebert
6,772,955 B2	8/2004	Yoshimoto et al.
6,811,089 B2	11/2004	Sekiya
6,814,832 B2	11/2004	Utsonomiya
6,819,986 B2	11/2004	Hong et al.
7,230,316 B2	6/2007	Yamazaki et al.

(Continued)

(75) Inventors: **Shunpei Yamazaki**, Setagaya (JP);
Yasuyuki Arai, Atsugi (JP); **Yohei Kanno**, Atsugi (JP)

(73) Assignee: **Semiconductor Energy Laboratory Co., Ltd.**, Atsugi-shi, Kanagawa-ken (JP)

FOREIGN PATENT DOCUMENTS

JP 2003-110458 4/2003

(Continued)

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

OTHER PUBLICATIONS

Nikkei Electronics, "Sense of Crisis" is a Trigger. Ignited Evolution of a Sesame-Grain Sized Chip, Technology Development is Entering Into the Second Phase, pp. 67-76, Nov. 18, 2002.

(21) Appl. No.: **13/164,797**

(22) Filed: **Jun. 21, 2011**

(65) **Prior Publication Data**

US 2011/0248089 A1 Oct. 13, 2011

Related U.S. Application Data

(62) Division of application No. 11/017,791, filed on Dec. 22, 2004, now Pat. No. 7,975,926.

(30) **Foreign Application Priority Data**

Dec. 26, 2003 (JP) 2003-433448

(51) **Int. Cl.**
G06K 19/00 (2006.01)

(52) **U.S. Cl.** **235/492**

(58) **Field of Classification Search** 235/492,
235/375, 379, 435, 439, 487

See application file for complete search history.

(56) **References Cited**

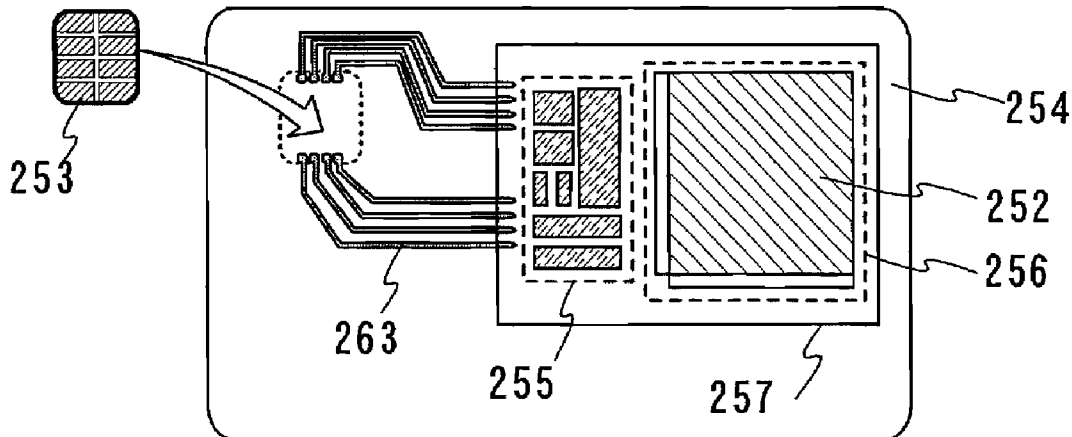
U.S. PATENT DOCUMENTS

5,126,541 A 6/1992 Shinagawa
5,286,962 A 2/1994 Fujioka et al.

(57) **ABSTRACT**

Although a product having such the IC chip has been diffused, information on the product may be capable of being perceived, abstracted, falsified, or the like by a third person with his external device during distribution of the product or after purchase of the product. Further, privacy may be seriously infringed. Paper money, various products, and the like are disclosed according to the present invention with an integrated circuit device having a switching memory for controlling reading and writing of information (lock/unlock of information) in order to protect the information recorded and stored in the integrated circuit such as an IC chip installed to the product or the like.

15 Claims, 24 Drawing Sheets



US 8,297,518 B2

Page 2

U.S. PATENT DOCUMENTS

7,240,846	B2	7/2007	Arisawa et al.	
7,271,076	B2	9/2007	Yamazaki et al.	
7,518,692	B2	4/2009	Yamazaki et al.	
7,566,001	B2*	7/2009	Yamazaki	235/492
7,647,505	B2	1/2010	Yudasaka	

FOREIGN PATENT DOCUMENTS

JP	2003-263623	9/2003
JP	2004-100166	4/2004

* cited by examiner

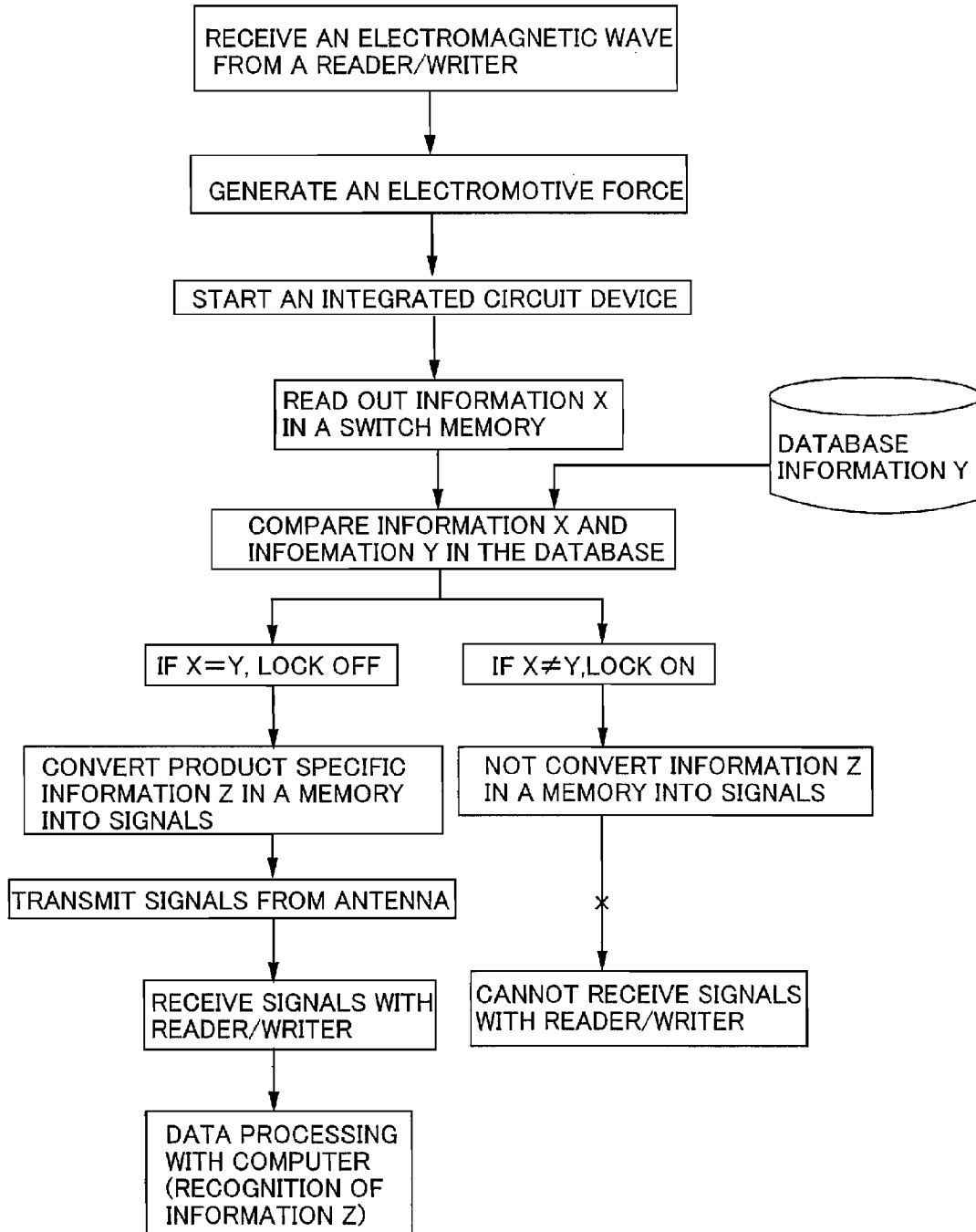


FIG. 1

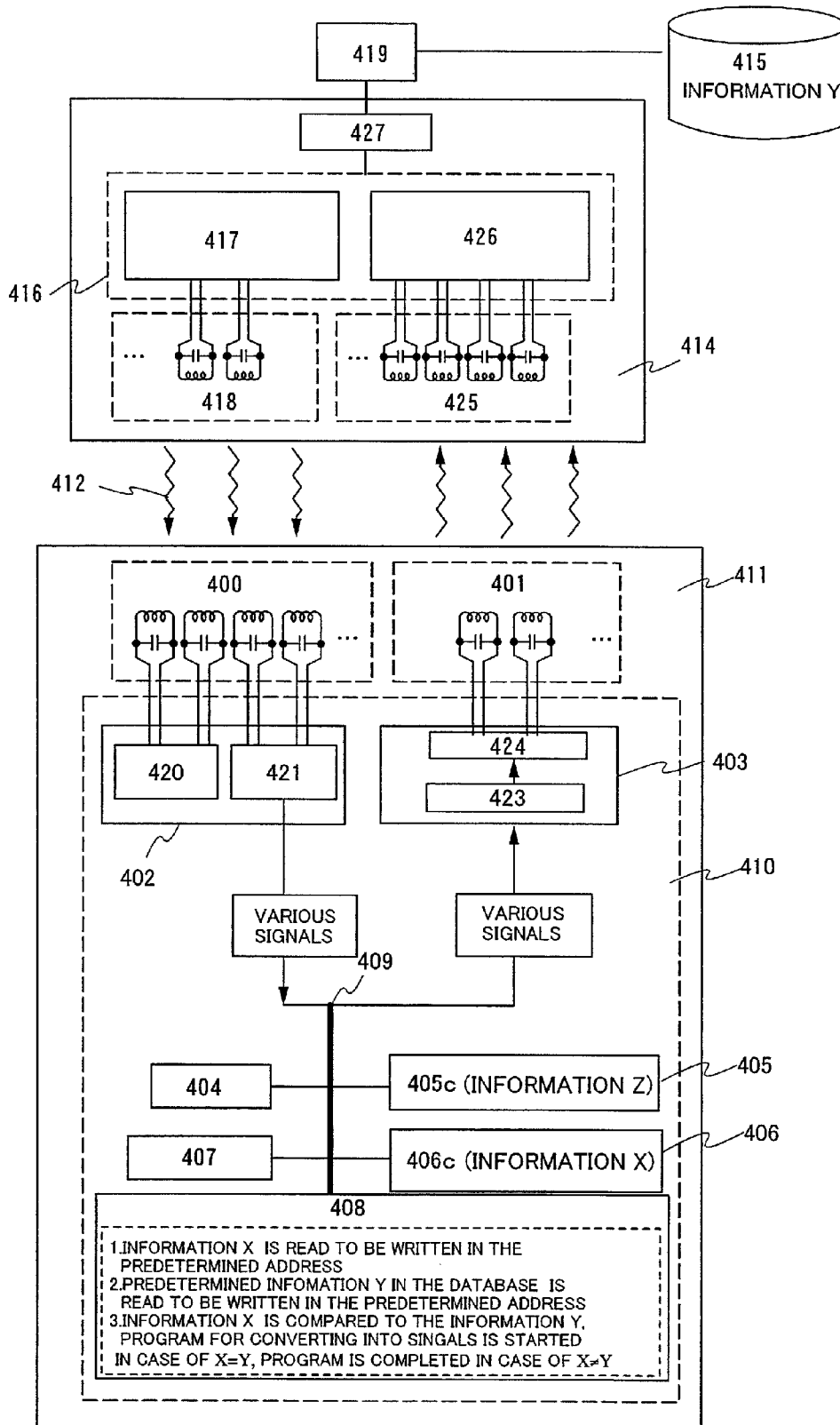


FIG. 2

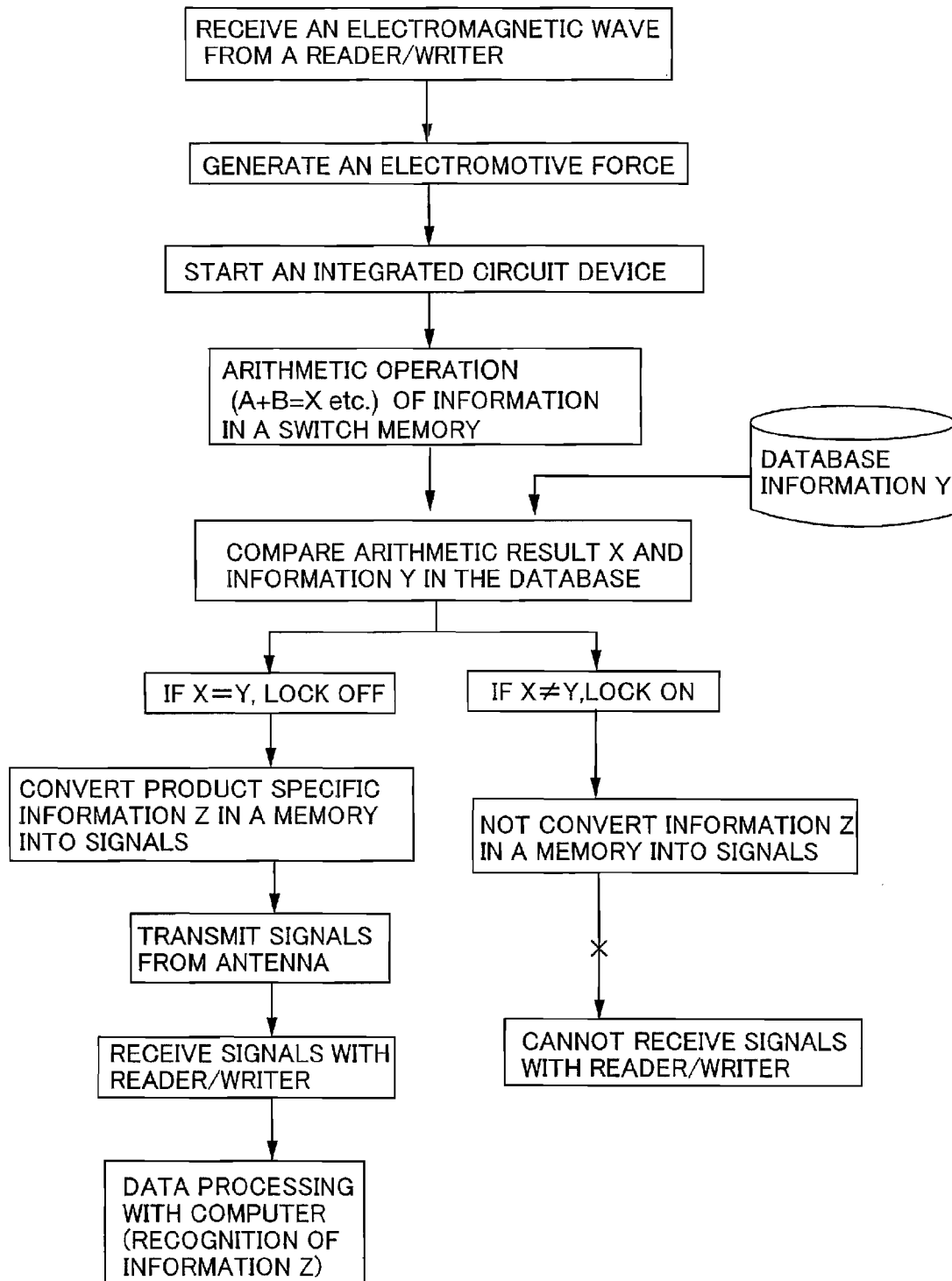


FIG. 3

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.