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**Hiraike**

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(54) **INFORMATION PROCESSING APPARATUS, CONTROL METHOD FOR INFORMATION PROCESSING APPARATUS, AND STORAGE MEDIUM**

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(58) **Field of Classification Search**  
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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

8,032,773 B2 *	10/2011	Kim .....	713/323
2002/0138669 A1 *	9/2002	Kadatch et al. ....	710/5
2006/0059380 A1 *	3/2006	Kimura .....	713/323
2007/0149256 A1 *	6/2007	Burgan et al. ....	455/574
2012/0042185 A1 *	2/2012	Lee et al. ....	713/323
2014/0113689 A1 *	4/2014	Lee .....	455/573

FOREIGN PATENT DOCUMENTS

JP	9-34578 A	2/1997
JP	2000-82014 A	3/2000
JP	2006-229509 A	8/2006

\* cited by examiner

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(57) **ABSTRACT**

An information processing apparatus capable of executing power ON processing for activating a program for storing information in a volatile memory or power OFF processing for stopping the program according to start or stop of power supply includes a communication unit configured to communicate with an external apparatus, a transfer unit configured to transfer a first mode for supplying power to a volatile memory and the communication unit to a second mode for supplying power to the volatile memory while not supplying power to the communication unit according to a data processing state, and a control unit configured to cause a first program to execute power saving processing for saving information stored in the volatile memory to a non-volatile memory and to cause a second program to execute the power OFF processing and the power ON processing when the mode is transferred from the first mode to the second mode.

**11 Claims, 7 Drawing Sheets**

