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(54) **Title:** SYSTEMS AND METHODS FOR COMMUNICATING TO A COMPUTING DEVICE INFORMATION ASSOCIATED WITH THE REPLENISHMENT STATUS OF A RETAIL ITEM

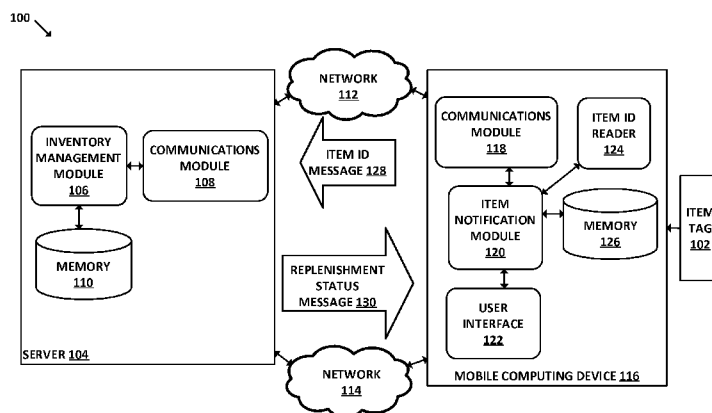


FIG. 1

(57) **Abstract:** Systems and methods for communicating to a computing device information associated with the replenishment status of a retail item are disclosed herein. According to an aspect, a method may include, at a first computing device, receiving, from a second computing device, a request for notification of replenishment of an item at a retail environment. The method may include determining replenishment status of the item at the retail environment. The method may also include communicating, to the second computing device, information associated with the replenishment status of the item.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER		
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B. FIELDS SEARCHED		
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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2002-216252 A (OMRON CORPORATION) 2002.08.02, [0001], [0032]-[0039], [0044]-[0045] , [0048], [0083]-[0084], FIG.1 (No Family)	1-25
Y	JP 5-216905 A (NEC CORPORAION) 1993.08.27, [0005], [0013], FIG.1 (No Family)	1-25
Y	JP 2000-99594 A (HITACHI INFORMATION SYSTEMS LTD) 2000.04.07, [0006] (No Family)	1-25
☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.		
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A	JP 2003-500767 A (CATALINA MAREKETING INTERNATIONAL, INC.) 2003.01.07, [0003], [0011]-[0015] & US 2002/0046082 A1 & EP 1180261 A1 & WO 2000/072279 A1 & BE 1012726 A3 & PT 102352 A & AU 5678899 A & ZA 9905705 A & CA 2371617 A1	1-25
A	JP 2003-176916 A (FINEFOODS CO LTD) 2003.06.27, [0104]-[0109] & JP 3955825 B2	1-25