

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number
WO 2005/048211 A3

(51) International Patent Classification⁷: **G08B 13/24**

(21) International Application Number:
PCT/US2004/034366

(22) International Filing Date: 18 October 2004 (18.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/705,677 10 November 2003 (10.11.2003) US

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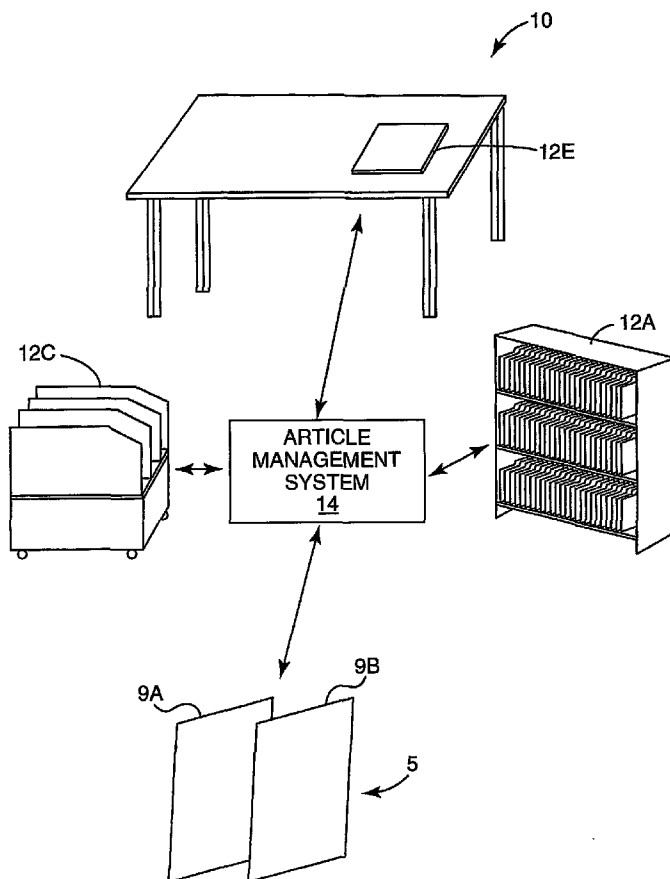
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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(54) Title: SYSTEM FOR DETECTING RADIO-FREQUENCY IDENTIFICATION TAGS



(57) Abstract: Techniques for detecting radio-frequency identification (RFID) tags are disclosed. For example, an exit control system is described that detects unauthorized removal of articles from a protected facility. A series of antennas are setup to produce interrogation corridors located near the exit of the protected area. RFID tags are attached to the articles to be protected. Each tag includes information that uniquely identifies the article to which it is affixed and status information as to whether the articles removal from the facility is authorized. The RF reader outputs RF signals through the antennas to create electromagnetic fields within the interrogation corridors. The reader outputs RF power from a single port to the multiple antennas via a splitter/combiner. In this way, a single RF reader with only one transmitter/receiver port simultaneously interrogates multiple antennas. A variety of techniques are described by which the reader can detect the removal of an unauthorized article.



(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

Published:

— *with international search report*

(88) **Date of publication of the international search report:**
15 September 2005

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations*

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