

Radioactive Waste Integrated Management System

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1688-5

RFID(Radio Frequency Identification)

GPS ,

CDMA

Abstract

In this paper, we present an integrated management system for radioactive waste, which can keep watch on the whole transporting process of each drum from nuclear power plant temporary storage house to radioactive waste storage house remotely. Our approach use RFID(Radio Frequency Identification) system, which can recognize the data information without touch, GSP system, which can calculate the current position precisely using the accurate time and distance measured from satellites, and the spread spectrum technology CDMA, which is widely used in the area of mobile communication.

RFID(Radio Frequency Identification)

GPS ,

CDMA

가

가

(Server)

(DB)

,
가 가

, ~95% 가 ,
 가 가 .
 , 가 .
 , IT 가
 , RFID
 (, PDA)
 / / ,
 GPS CDMA ,

RFID(Radio Frequency Identification) ,
 GPS(Global Positioning System) ,
 CDMA(Code Division Multiple Access)

RFID, GPS(Global Positioning System) CDMA(Code Division Multiple Access)

1.

가. RFID(Radio Frequency Identification :)

RFID

, RFID (Noncontact Card)
 RFID
 RFID (Noncontact Card) , 가
 (READER)

1 RFID
 ID 가 (TAG)가 가 ID
 ID
 PC PC

10 KHz ~ 300 GHz가

(134.2KHz)가
(Battery)

64bits ~ 8kbytes

. GPS(Global Positioning System)

GPS GPS

. .

2 GPS

GPS

3

3

. CDMA(Code Division Multiple Access)

CDMA

CDMA

1950
가

1960

가

가

가

가

IS-95

2.

가.

5

RFID (2)

(1) , RFID (2) 64 kbits

RFID

RFID (2)

RFID

가

(, PDA)(3)

(, PDA)(3)

(1)

6

(110)

(410)

(1) RFID (2) (1) RF Reader/Writer(210,440) ,

(110) (340) RF Reader (340)

(220,430) , (Communication Kit)(220)

RFID (2) , (220) RF Writer (110)

(120) .

7 3

4 (1) (310) GPS (320)

(311) CDMA (312) , GPS () (320)

(310) 1 , /

(320) 1 CDMA ()

(330) ±300m 가 2

.(

.) (310) RF (READER)(313)

GPS (311) CDMA (312) , RF (313)

CDMA 가 (314) (340) (410)

CDMA (340) (410) (3 4),

(4)

8 (1) ()

RF Reader RFID (2) , (430)

RF Writer RFID (2) (430) (340)

(410) (420) , (430) (340)

(340) (410) (310) CDMA

()

(1) () RFID

, RFID (2) 가 .

1.

5 9 , RFID ,
 (, PDA)
 (1) RFID (2) , (, PDA)
 (100) .

2.

6 9 ,
 RF Reader
 (Communication Kit)(220) (340) , (340)
 (220) RF Writer RFID (2) ,
 (110) (120)
 (200) .

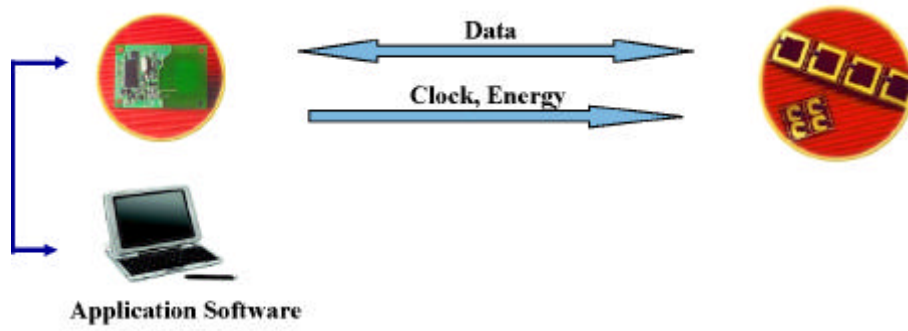
3.

7 9 ,
 RFID
 (310) (1)
 (1) RFID (2) (330)
 (340) (410) ()
 (1) (300) . GPS
 () (320) (310) , /
 CDMA () (330) ±300m 가
 (1) RFID (2) (310) RF (READER)(313) (330)
 , (310) (420)
 RFID GPS/CDMA
 (340) (1) ,
 가 (350)
 (1) .

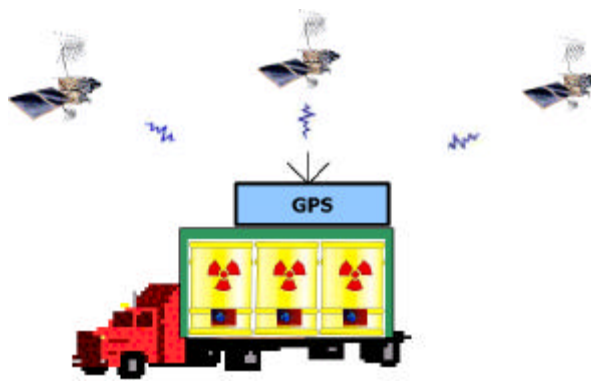
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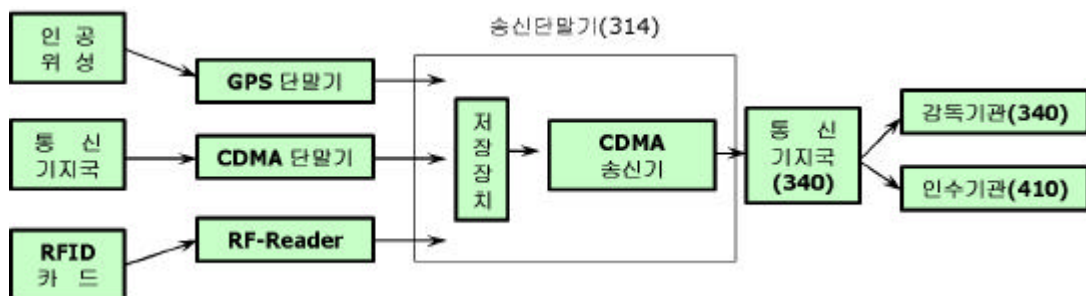
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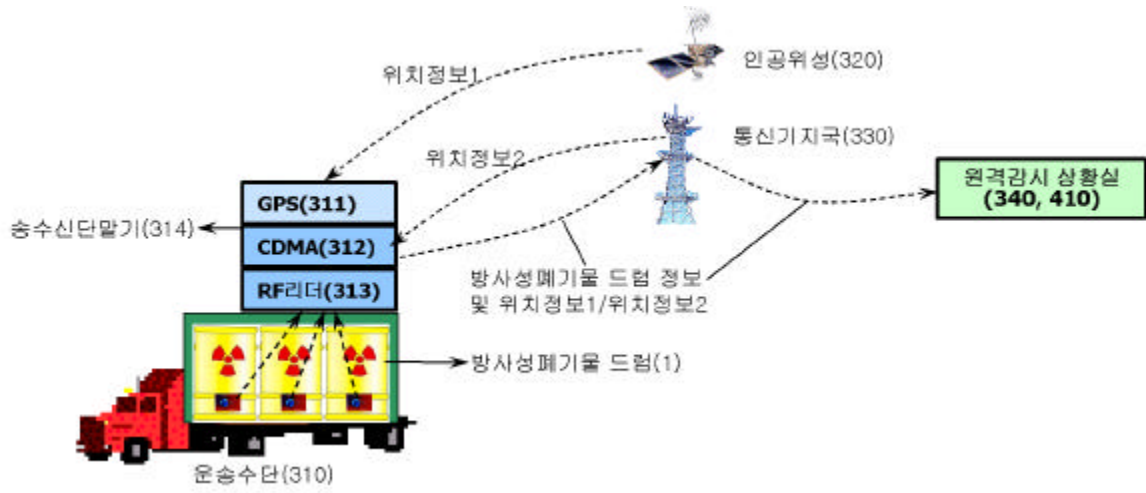
1. RFID



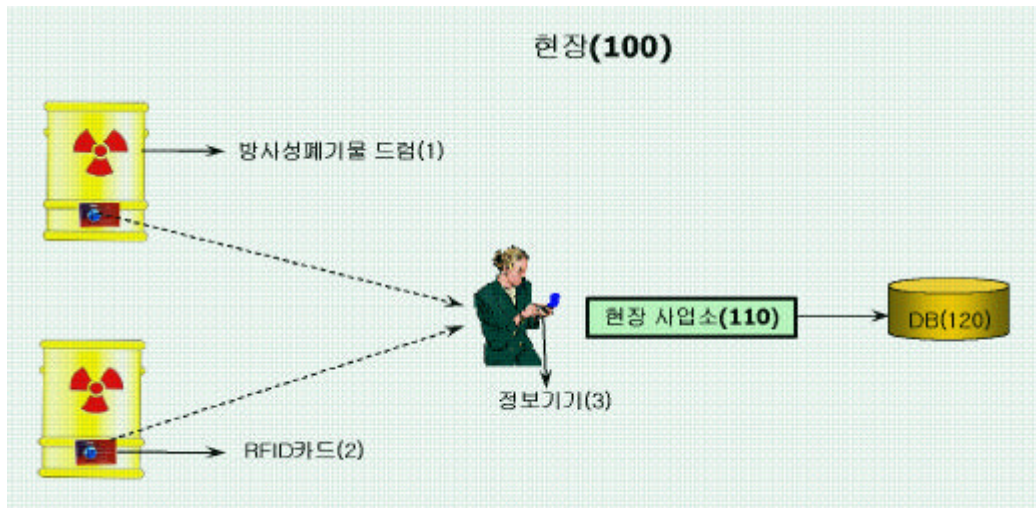
2. GPS



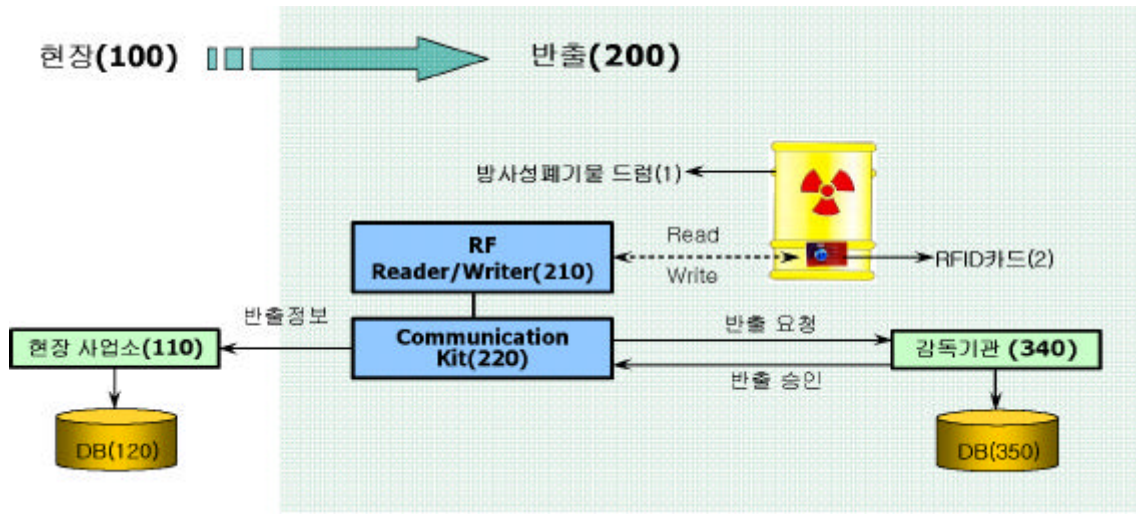
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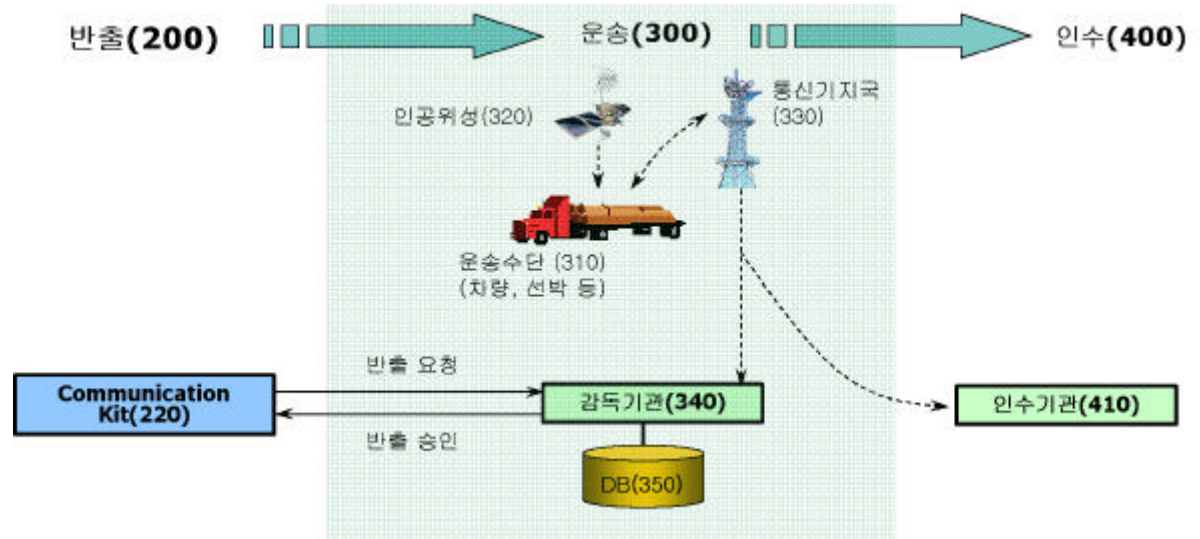
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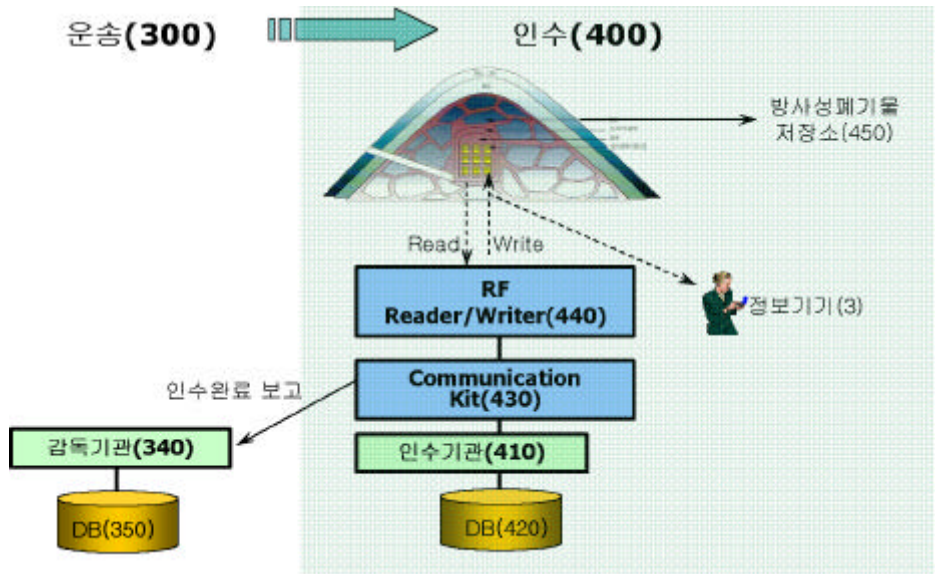
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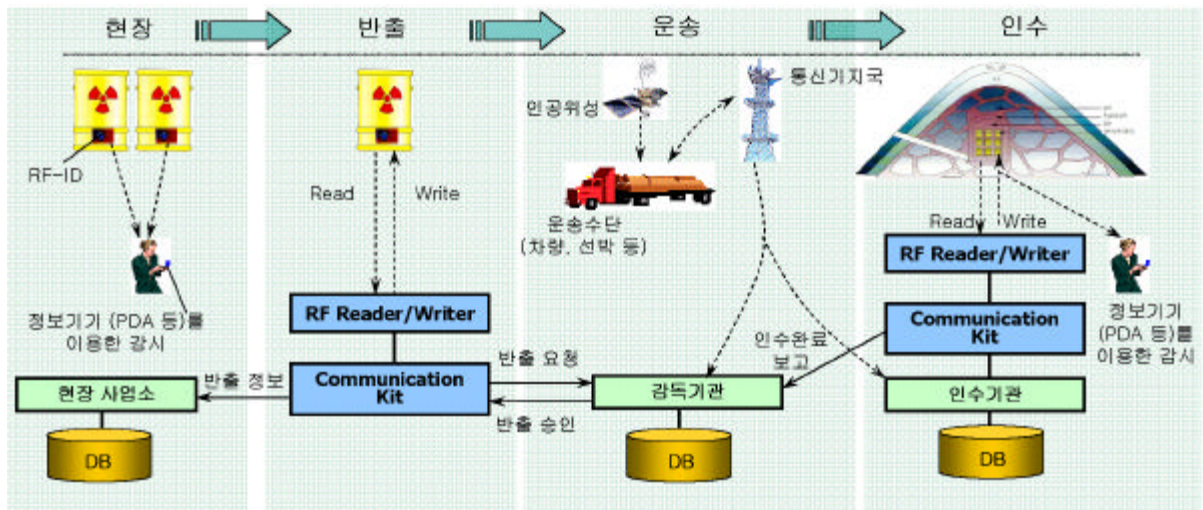
6.



7.



8.



9.