

FSASE SUMMER CONFERENCE 2017

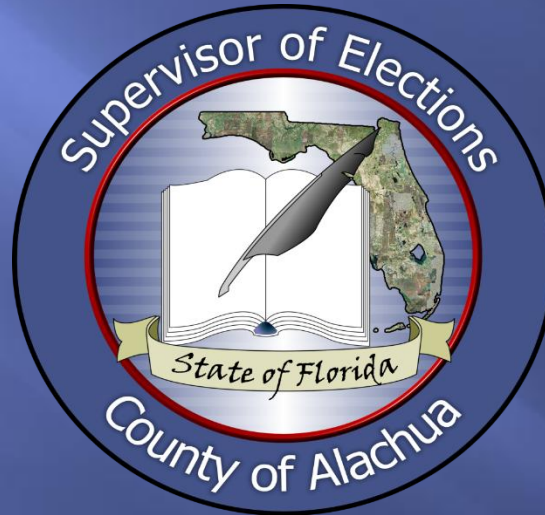


ELECTION EQUIPMENT INVENTORY
MANAGEMENT

RFID EMBEDDED ASSET MANAGEMENT SYSTEM

Kim A. Barton, Supervisor of Elections

Tim L. Williams, Director of Operations



Alachua County

Gainesville, Florida

Registered Voters 180,057

RADIO FREQUENCY IDENTIFICATION

RFID



Reads & Transmits a small amount of unique data – a serial number or other unique attribute.

Data can be read and transmitted from a distance with NO contact or line of sight.

Tracks assets regardless of size.

The Worst Election Nightmare !

"They never
thought it could
happen to them,
but it did!"

Their assets grew legs...



And disappeared!



RFID – IS NOT NEW TECHNOLOGY

Research & development during WWII

RFID invented in 1948

Laboratory experiments and exploration

Application Field Trials

1940 – 1950 – 1960 – 1970 – 1980 – 1990 – 2006

Mass development for applications

Introduced to mainstream commercial applications

Standards set, deployed world wide becomes part of normal commercial procedures

HOW RFID WORKS

A micro chip embedded in a Tag –
Transmits data when the Tag is exposed to
radio waves.



GOVERNMENT APPLICATIONS



DOD – Ammo issued, including single bullets

DOT – Vehicles (Sunpass toll)

Courts – Documents and official Records

EPA – Hazardous waste and material

FEMA – Corpses after hurricane Katrina

UF – Bees entering/exiting bee hives

Other – Employees, ID proximity cards

COMMERCIAL APPLICATIONS



Farmers – Produce production

Ranchers – Live stock

Veterinarians – Pets

Airport- Automobiles

Stores – Grocery carts & merchandise

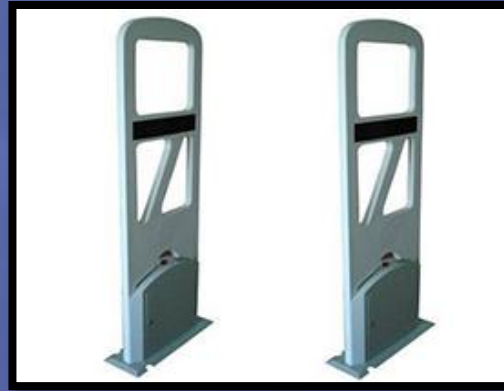
Banks – Credit cards and currency

Disney – Fountain drink cups and Magic bands

**READER -
TRANSCEIVER -
ANTENNA**



TAGS



**HOST COMPUTER
w/ software**



TAG	ACTIVE	PASSIVE
Power source	Internal	No Power source
Battery	Yes	No
Power	Continuous	Only in field of portal
Data Storage	Up to 128 Kb	Up to 128 Kb
Size	Large – thick	Small – thin
Price for Tag	\$3 to \$400 each	\$0.05 to \$2 each

Active Tags



Passive Tags



ELECTIONS APPLICATIONS

Alachua County SOE Assets Tracked with RFID Tags

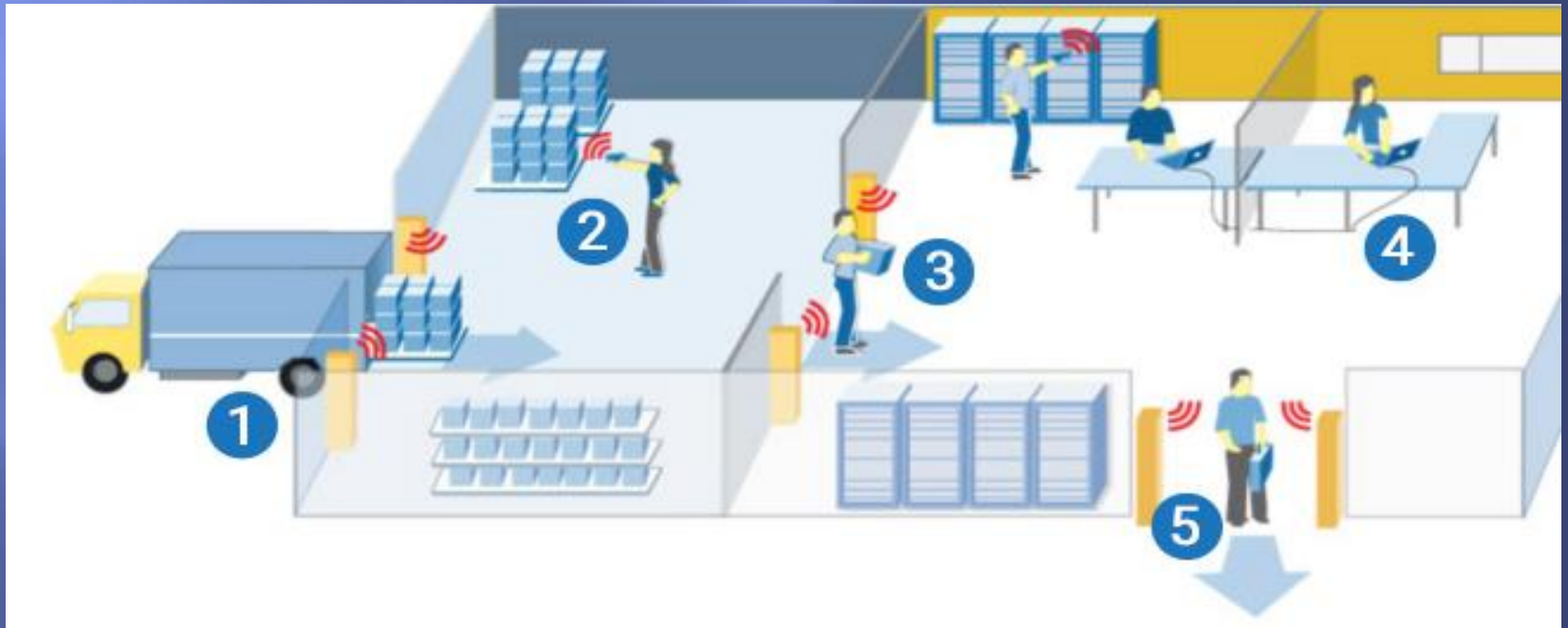
- Ballot box
- Ballot transfer bags
- Clerk packs
- Clerk return bags
- Precinct signs
- Precinct supply carts
- Voting booths
- Optical scanners
- Precinct tables
- Many others



RFID TAGS are embedded out of sight. No need for interaction!

RFID READER TRANSCEIVER ANTENNA (RTA)

- Building entrances and exits
- Loading docks
- Clerk's staging area
- Election night return area



RFID COMPUTER SOFTWARE

← → <https://www.vote4alachua.net/PAMS/Main.htm> Poll Asset Management Sys... X

Google Search Share More » Sign In

Poll Asset Management System PAMS Technical Help Logout
 Eastern Standard Time: Friday, June 2, 2017 4:11:38 PM Hello, rfid admin (Version 2.2.14.1028)

Home Back Export Correction of Assigned PCT Order Index View By Color

414 City of Gainesville / 415 City of Micanopy

Equipment Status View By Color In Packed Not Checked Out Checked Out Checked In

Location Type	Location	A1 BALLOT BOX	A1 BALLOT BOX	A2 LID	A2 LID	A3 COVER	A3 COVER	A4 TABULATOR	A4 TABULATOR	B1 CART	C2 Red Bag	B3 Precinct Sign	B2 Pizza Box Booths	B2 Pizza Box Booths	B2 Pizza Box Booths	B2 Pizza Box Booths	B2 Pizza Box Booths	B6 Voted Ballot Bag	C1 Clerk's Packs
Parent PCT	00005	✓BBX0501	✓BBX0502	✓LID0501	✓LID0502	✓COVER0501	✓COVER0502	✓TAB 0501	✓TAB 0502	✓CART 05	✓RBag0005		✓	✓	✓			✓VOBAL0005	✓CLKPK0005
Parent PCT	00007	✓BBX0701	✓BBX0702	✓LID0701	✓LID0702	✓COVER0701	✓COVER0702	✓TAB 0701	✓TAB 0702	✓CART 07	✓RBag0007		✓PZBT3399	✓PZBT3400	✓PZBT3440			✓VOBAL0007	✓CLKPK0007
Parent PCT	00010	✓BBX1001	✓BBX1002	✓LID1001	✓LID1002	✓COVER1001	✓COVER1002	✓TAB 1001	✓TAB 1002	✓CART 10	✓RBag0010		✓PZBT3311	✓PZBT3411	✓PZBT3423			✓	✓CLKPK0010
Parent PCT	00012	✓BBX1201	✓BBX1202	✓LID1201	✓LID1202	✓COVER1201	✓COVER1202	✓TAB 1201	✓TAB 1202	✓CART 12	✓RBag0012	PSIGN0012	✓PZBT3307	✓PZBT3366	✓PZBT3404			✓VOBAL0012	✓CLKPK0012
Parent PCT	00013	✓BBX1301	✓BBX1302	✓LID1301	✓LID1302	✓COVER1301	✓COVER1302	✓TAB 1301	✓TAB 1302	✓CART 13	✓RBag0013	PSIGN0013	✓PZBT3305	✓PZBT3315	✓PZBT3350	✓PZBT3530		✓VOBAL0013	✓CLKPK0013
Parent PCT	00017	✓BBX1701	✓BBX1702	✓LID1701	✓LIDSPARE1	✓COVER1701	✓COVER1702	✓TAB 1701	✓TAB 1702	✓CART 17	✓RBag0017	PSIGN0017	✓PZBT3384	✓PZBT3393	✓PZBT3422			✓VOBAL0017	✓CLKPK0017
Parent PCT	00019	✓BBX1901	✓BBX1902	✓LID1901	✓LID1902	✓COVER1901	✓COVER1902	✓TAB 1901	✓TAB 1902	✓CART 19	✓RBag0019		✓PZBT3319	✓PZBT3379	✓PZBT3394			✓VOBAL0019	✓CLKPK0019
Parent PCT	00021	✓BBX2101	✓BBX2102	✓LID2101	✓LID2102	✓COVER2101	✓COVER2102	✓TAB 2101	✓TAB 2102	✓CART 21	✓RBag0021		✓PZBT3388	✓PZBT3483	✓PZBT3493	✓PZBT3476		✓VOBAL0021	✓CLKPK0021
Parent PCT	00022	✓BBX2201	✓BBX2202	✓LID2201	✓LID2202	✓COVER2201	✓COVER2202	✓TAB 2201	✓TAB 2202	✓CART 22	✓RBag0022	PSIGN0022	✓PZBT3401	✓PZBT3456	✓PZBT3496	✓PZBT3509		✓VOBAL0022	✓CLKPK0022
Parent PCT	00023	✓BBX2301	✓BBX2302	✓LID2301	✓LID2302	✓COVER2301	✓COVER2302	✓TAB 2301	✓TAB 2302	✓CART 23	✓RBag0023		✓PZBT3461	✓PZBT3484				✓VOBAL0023	✓CLKPK0023
Parent PCT	00024	✓BBX2401	✓BBX2402	✓LID2401	✓LID2402	✓COVER2401	✓COVER2402	✓TAB 2401	✓TAB 2402	✓CART 24	✓RBag0024		✓PZBT3426	✓PZBT3457				✓VOBAL0024	✓CLKPK0024
Parent PCT	00025	✓BBX2501	✓BBX2502	✓LID2501	✓LID2502	✓COVER2501	✓COVER2502	✓TAB 2501	✓TAB 2502	✓CART 25	✓RBag0025		✓PZBT3455	✓PZBT3462				✓VOBAL0025	✓CLKPK0025
Parent PCT	00026	✓BBX2601	✓BBX2602	✓LID2601	✓LID2602	✓COVER2601	✓COVER2602	✓TAB 2601	✓TAB 2602	✓CART 26	✓RBag0026	PSIGN0026	✓PZBT3468	✓PZBT3518				✓VOBAL0026	✓CLKPK0026
Parent PCT	00027	✓BBX2701	✓BBX2702	✓LID2701	✓LID2702	✓COVER2701	✓COVER2702	✓TAB 2701	✓TAB 2702	✓CART 27	✓RBag0027		✓PZBT3344	✓PZBT3452	✓PZBT3465			✓VOBAL0027	✓CLKPK0027
Parent PCT	00028	✓BBX2801	✓BBX2802	✓LID2801	✓LID2802	✓COVER2801	✓COVER2802	✓TAB 2801	✓TAB 2802	✓CART 28	✓RBag0028	PSIGN0028	✓PZBT3501	✓PZBT3515				✓VOBAL0028	✓CLKPK0028
Parent PCT	00031	✓BBX3101	✓BBX3102	✓LID3101	✓LID3102	✓COVER3101	✓COVER3102	✓TAB 3101	✓TAB 3102	✓CART 31	✓RBag0031	PSIGN0031	✓PZBT3362	✓PZBT3389	✓PZBT3414	✓PZBT3458	✓	✓VOBAL0031	✓CLKPK0031

Poll Chief by Konnech

- Asset management
- Real time logging
- 24/7 Security tracking
- Inventory Data Collection

Equipment Status View By Color													
Location Type	Location	A1BALLOT BOX	A1BALLOT BOX	A2 LID	A2 LID	A3 COVER	A3 COVER	A4 TABULATOR	A4 TABULATOR	B1CART	C2 Red Bag	B3 Precinct Sign	
Parent PCT	5	√ BBX0501	√ BBX0502	√ LID0501	√ LID0502	√ COVER0501	√ COVER0502	√ TAB 0501	√ TAB 0502	√ CART 05	√ RBag0005		√
Parent PCT	7	√ BBX0701	√ BBX0702	√ LID0701	√ LID0702	√ COVER0701	√ COVER0702	√ TAB 0701	√ TAB 0702	√ CART 07	√ RBag0007		√
Parent PCT	10	√ BBX1001	√ BBX1002	√ LID1001	√ LIS1002	√ COVER1001	√ COVER1002	√ TAB 1001	√ TAB 1002	√ CART 10	√ RBag0010		√
Parent PCT	12	√ BBX1201	√ BBX1202	√ LID1201	√ LID1202	√ COVER1201	√ COVER1202	√ TAB 1201	√ TAB 1202	√ CART 12	√ RBag0012	PSIGN0012	√
Parent PCT	13	√ BBX1301	√ BBX1302	√ LID1301	√ LID1302	√ COVER1301	√ COVER1302	√ TAB 1301	√ TAB 1302	√ CART 13	√ RBag0013	PSIGN0013	√
Parent PCT	17	√ BBX1701	√ BBX1702	√ LID1701	√ LIDSPARE1	√ COVER1701	√ COVER1702	√ TAB 1701	√ TAB 1702	√ CART 17	√ RBag0017	PSIGN0017	√
Parent PCT	19	√ BBX1901	√ BBX1902	√ LID1901	√ LID1902	√ COVER1901	√ COVER1902	√ TAB 1901	√ TAB 1902	√ CART 19	√ RBag0019		√
Parent PCT	21	√ BBX2101	√ BBX2102	√ LID2102	√ LID2101	√ COVER2101	√ COVER2102	√ TAB 2101	√ TAB 2102	√ CART 21	√ RBag0021		√
Parent PCT	22	√ BBX2201	√ BBX2202	√ LID2201	√ LID2202	√ COVER2201	√ COVER2202	√ TAB 2201	√ TAB 2202	√ CART 22	√ RBag0022	PSIGN0022	√
Parent PCT	23	√ BBX2301	√ BBX2302	√ LID2301	√ LID2302	√ COVER2301	√ COVER2302	√ TAB 2301	√ TAB 2302	√ CART 23	√ RBag0023		√
Parent PCT	24	√ BBX2401	√ BBX2402	√ LID2401	√ LID2402	√ COVER2401	√ COVER2402	√ TAB 2401	√ TAB 2402	√ CART 24	√ RBag0024		√
Parent PCT	25	√ BBX2501	√ BBX2502	√ LID2501	√ LID2502	√ COVER2501	√ COVER2502	√ TAB 2501	√ TAB 2502	√ CART 25	√ RBag0025		√
Parent PCT	26	√ BBX2601	√ BBX2602	√ LID2601	√ LID2602	√ COVER2601	√ COVER2602	√ TAB 2601	√ TAB 2602	√ CART 26	√ RBag0026	PSIGN0026	√
Parent PCT	27	√ BBX2701	√ BBX2702	√ LID2701	√ LID2702	√ COVER2701	√ COVER2702	√ TAB 2701	√ TAB 2702	√ CART 27	√ RBag0027		√
Parent PCT	28	√ BBX2801	√ BBX2802	√ LID2801	√ LID2802	√ COVER2801	√ COVER2802	√ TAB 2801	√ TAB 2802	√ CART 28	√ RBag0028	PSIGN0028	√
Parent PCT	31	√ BBX3101	√ BBX3102	√ LID3101	√ LID3102	√ COVER3101	√ COVER3102	√ TAB 3101	√ TAB 3102	√ CART 31	√ RBag0031	PSIGN0031	√
Parent PCT	32	√ BBX3201	√ BBX3202	√ LID3201	√ LID3202	√ COVER3202	√ COVER3201	√ TAB 3201	√ TAB 3202	√ CART 32	√ RBag0032		√
Parent PCT	33	√ BBX3301	√ BBX3302	√ LID3301	√ LIDSPARE5	√ COVER3301	√ COVER3302	√ TAB 3301	√ TAB 3302	√ CART 33	√ RBag0033	PSIGN0033	√
Parent PCT	36	√ BBX3601	√ BBX3602	√ LID3601	√ LID3602	√ COVER3601	√ COVER3602	√ TAB 3601	√ TAB 3602	√ CART 36	√ RBag0036		√
Parent PCT	37	√ BBX3701	√ BBX3702	√ LID3701	√ LID3702	√ COVER3701	√ COVER3702	√ TAB 3701	√ TAB 3702	√ CART 37	√ RBag0037	PSIGN0037	√
Parent PCT	38	√ BBX3801	√ BBX3802	√ LID3801	√ LID3802	√ COVER3801	√ COVER3802	√ TAB 3801	√ TAB 3802	√ CART 38	√ RBag0038		√
Parent PCT	39	√ BBX3901	√ BBX3902	√ LID3901	√ LID3902	√ COVER3901	√ COVER3902	√ TAB 3901	√ TAB 3902	√ CART 39	√ RBag0039		√
Parent PCT	40	√ BBX4001	√ BBX4002	√ LID4001	√ LID4002	√ COVER4001	√ COVER4002	√ TAB 4001	√ TAB 4002	√ CART 40	√ RBag0040		√
Parent PCT	44	√ BBX4401	√ BBX4402	√ LID4401	√ LID4402	√ COVER4401	√ COVER4402	√ TAB 4401	√ TAB 7402	√ CART 44	√ RBag0044		√
Parent PCT	45	√ BBX4501	√ BBX4502	√ LID4501	√ LID4502	√ COVER4501	√ COVER4502	√ TAB 4501	√ TAB 4502	√ CART 45	√ RBag0045	PSIGN0045	√
Parent PCT	50	√ BBX5001	√ BBX5002	√ LID5001	√ LID5002	√ COVER5001	√ COVER5002	√ TAB 5001	√ TAB 5002	√ CART 50	√ RBag0050	PSIGN0050	√

RFID FLOW CHART



STAGING

Data
compiled
for
election in
Poll Chief

Election
assets staged
for Clerks
and precinct
delivery

CHECK OUT/RETURN

Election
Assets
passed
through
portals

Color-Coded
Checked
Out = **RED**
In = **GREEN**

- RTA's (Portals) integrated with sound notification

Check Out



Check in/out

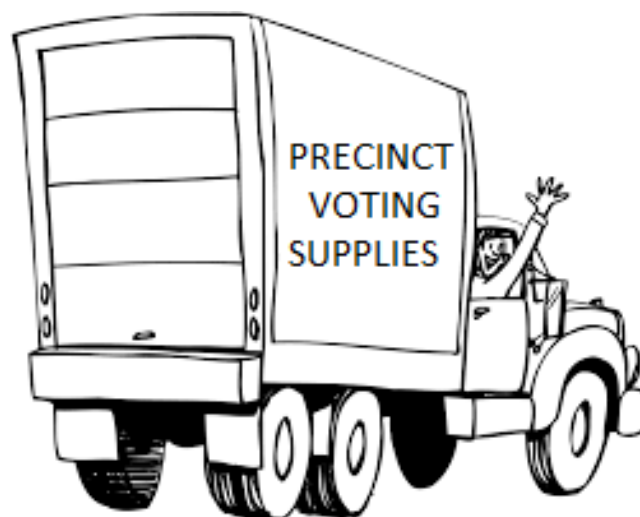
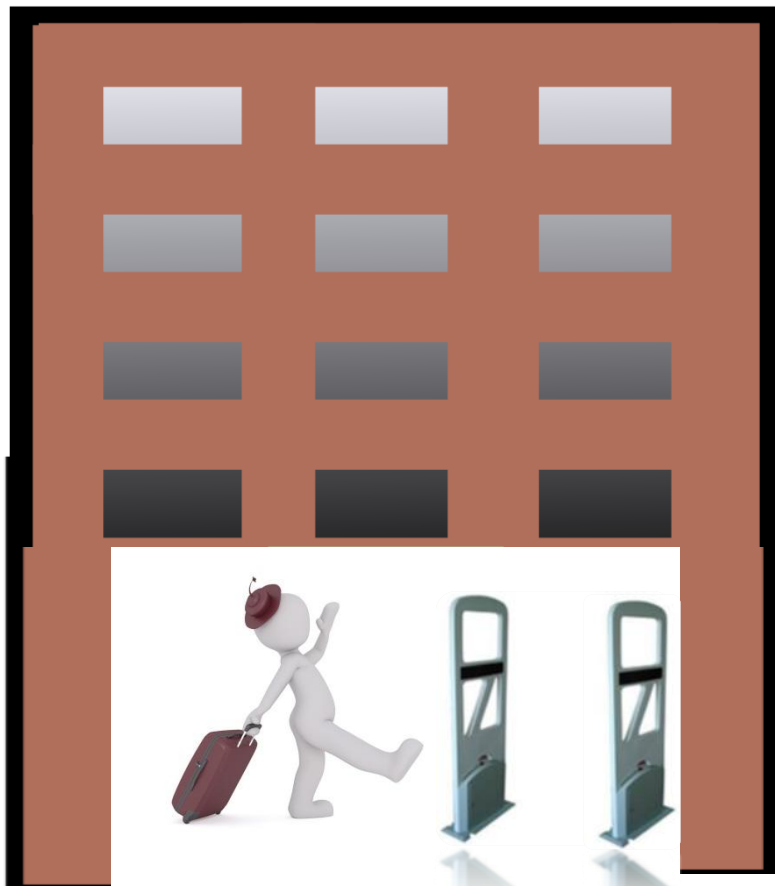


Check In



ASSET TRACKING

As assets pass through the portals, a preassigned .WAV file is sounded and sends email notifications in real time



RFID ASSET MANAGEMENT BENEFITS

- Improves chain of custody
- Speeds up logistical process
- Less labor intensive than other systems
- Less human interaction with less errors
- Public appreciation and perception of high security
- Results in a successful election with all assets accounted for in a timely manner

Thank you for your interest
about RFID technology used
by the Supervisor of Elections
in Alachua County

