

Got Snowbirds?!

Installation of Wireless in an RV Park
Presented by
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Moi!



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- 17 years in the cable industry
- CWTS, CWNA, CWDP
- As of this writing I am the only CWNP certified technician in the cable industry.
- Twitter: weirdave



What is a snowbird?

A snowbird is a term often associated with people who move from the higher latitudes and colder climates of the northern United States and Canada and migrate southward in winter to warmer locales such as Florida, California, Hawaii, Arizona, Texas, or elsewhere along the Sun Belt of the southern and southwestern United States, Mexico, and areas of the Caribbean.



Why do you care?

A significant portion of the snowbird community is made up of recreational vehicle users (RVers). Many own a motor home for the sole purpose of traveling south in the winter. While historically Florida has been the number one RV snowbird location, other southern U.S. states are experiencing a boom from snowbirds enjoying the southern climate during winter months. The Recreational Vehicle Industry Association estimates that there are over 2 million Snowbirds spending the winter in RVs.



What matters in an RV park?

- Coverage!
 - Permanent Resident Structures
 - Lot Capacity
 - Distance or Size of the Park
 - Community and Common Areas
- The Season and Weather
- User Experience
- Security, Bands and More!
- Equipment and profit



Permanent Resident Structures

- Stationary
- Can be surveyed
- Structure materials



Lot Capacity

- How many users in structures can I possibly have?
- This really isn't just about the amount of people or devices, but the structures they are in and where or how they are placed



Distance or Size of the Park

- Many of the RV parks in Florida that support the snowbird community are at least twice the size of a traditional “mobile home” park. This is typically because they have a “guaranteed” user base that returns year after year.
- Comparatively a larger sized mobile home park contains roughly 230 lots where as, a snowbird RV park can contain 640 lots or 3 times that many!
- They also support a mixture of permanent and transient clients who demand and require a variety of activities.



Community and Common Areas

- Snowbird parks often have golf courses, multiple pools, activity centers, marinas, ballrooms, restaurants, movie theaters and many more gathering spots than an average mobile home park.
- Some or all of these area may require coverage.



Coverage in a community building

- Because of walls and the need to provide access to a congregated user base the design for community buildings will most likely not be the same design (or even the same equipment) as the rest of the park
- Indoor access points can be utilized which lowers the cost.
- Planning for these environments is typical and straightforward



The Season and Weather

- For much of the South weather can play a big role in planning. You must consider full sun, to full rain. And of course.... The Lightning!



No not that lightning, this **LIGHTNING!**



Some quick facts on lightning (wait for it):

- Florida has a whopping 25.3 strikes per square mile and 1.45 million lightning strikes each year, on average.
- Florida is also the deadliest for lightning, with 62 deaths over the past 10 years.



Poles

- As a result of our concerns with lightning we had to research and investigate and utilize, custom made poles.
- They were constructed of fiberglass to avoid being a lightning rod themselves
- The ones we chose are 20' above ground 5' in ground to be above most of the tallest RV's
- Able to withstand winds of 140 MPH (Middle of a class 4 Hurricane)



Access Point Location

- For the purposes of serviceability access points are located in an enclosure called a doghouse



User Experience

- Or as I like to repeat over and over... does this work for everyone?
- The greatest number of Snowbirds are over the age of 50 with most between 60 and 74.
- A recent casual survey conducted at a typical site found that the average RV contains 2 people, and each of those users had a cell phone, a tablet or an e-reader, and one shared laptop or desktop. Android devices represented only 1 in 10 users in RV demographics while Apple dominated this population.



Security, Bands...

- Typical deployments include 2 separate VLANS one for guests and one for staff
- For guests - An informational captive portal page that can be modified for current events
- For the staff - A WPA2 hidden network to avoid confusion for the guests and eliminate unnecessary calls



... and More!

- Much to the frustration of many CWNE's both 2.4 and 5ghz radios are enabled and due to cost constraints, the network designs are centered for 2.4.
- Fortunately, most parks are isolated and surrounded by a good amount of greenspace minimizing interference
- Static channel plan are used to mitigate CCI/CCC amongst the APs



Installation = Profit

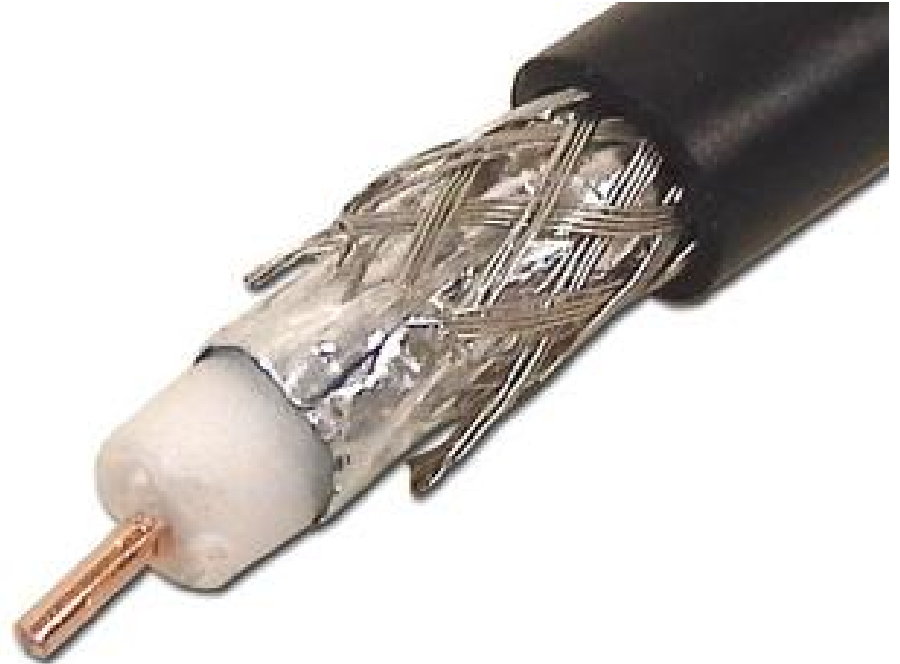


- Typical installations in an RV park can include up to a 100 or more access points and ancillary equipment such as antenna, poles, mounting equipment, environmental enclosures, controllers, switches, and power over Ethernet gear (POE).



Installation = Profit

- Cabling, such as Fiber, CAT5/6 or RF can account for a large installation cost/profit as often the distances are vast which requires fiber
- Often the bulk of the cost for an install, can be in providing the actual backbone for the network not in the wireless equipment itself (enterprise vs. private)



Questions?



Twitter: weirdave



References

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