

Wireless Next Generation Refresh Project

Network Engineering Services and Physical Infrastructure Teams

Enterprise Infrastructure Division

Information Technology Services

1/20/2021

UI Wireless Services Current State

- 10,369 wireless access points in service across the Aruba 200, 300, and 500 series
 - 92% are 200 series and end of support spring of 2023
 - 1% are 200 series and end of support spring of 2024
 - 5% are 300 series and have been in service for roughly four years
 - 2% are 500 series and are Wi-Fi 6 capable and technologically current
- Based on NES sampling – 16% of wireless clients on the UI campus are Wi-Fi 6 capable today

New AP View(s) – 535 Series and 505h Series



Wi-Fi 6

- Allows multiple client devices to communicate with AP at the same time. Optimal for upload capabilities required in video, e-learning, social and collaboration applications
- Client capacity per access point is increasing by a factor of four
- Segmentation – enables low speed IoT devices and services like voice and video to coexist without impacting each other.
- Security – WPA3 and the ability to encrypt open wireless services (Open Wireless Encryption) Segmentation capabilities enables isolation of devices and their traffic

Wi-Fi 6

- Zigbee radio's for IoT (wireless door locks, facility sensors, etc)
- Bluetooth low energy for IoT, wayfinding, and other applications
- Targeted Wake Time- enables clients to remain asleep until their time to transmit saving battery

Wi-Fi 6 and 5G Considerations

- Wi-Fi 6 is available now and 5G is still in roll out process
- Not an either/or - Wi-Fi 6 and 5G will be full peer radio networks with the ability to roam between them – potentially eliminating Distributed Antennae Systems (DAS)
- Predominantly 5G for outside spaces and Wi-Fi 6 for inside spaces
- Wi-Fi 6 is fully backward compatible from a client device perspective
- Wi-Fi 6 will natively dove tail in to the campus core new technologies and 5G will not

Project Timeline and Scope

- Projected start date pending electronics arrival is Feb 15, 2021
- Completion in the spring of 2023 for all local and remote UI buildings and facilities
- Targeted as a one for one replacement of existing access points.
- Surveying will be done prior and afterward. If additional access points are required, we will add them

Where we need your assistance

- Coordination of and access to the buildings when the time comes
- Notification assistance to building occupants
- We need you to be our point of contact for buildings as things arise
 - If wireless service downtimes exceeding our planned window, etc
 - If we unexpectedly have to do any cabling or wireless access point moves, etc

Questions?

- We look forward to working with all of you to enhance existing wireless services to your buildings
- Thank you for your time today!
 - After presentation questions:
 - George Stumpf, Director of Physical Infrastructure, ITS
 - Jeff Gillitzer, Director of Network Engineering Services, ITS