

# UNIVERSITY of **HOUSTON**

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## STUDENT AFFAIRS & ENROLLMENT SERVICES Campus Recreation

### FY15 One Time Funding Request



Student Fee Advisory Committee

STUDENT AFFAIRS & ENROLLMENT SERVICES  
Campus Recreation

To: SFAC Committee

From: Kim Clark, Director, Department of Campus Recreation

Date: 10/20/14

Re: FY15 SFAC One Time Funding Request

Students expect to be “connected” to the internet 24-7 whether they are working out, studying in the facility between classes, posting the latest intramural score or workout through their favorite social media site, or implementing a program or event. Students have come to expect Wi-Fi capabilities in all facilities on campus, and this is a feature that the CRWC currently lacks with service limited to the rotunda.

The need to improve and expand wireless service in the facility continues to surface with students. Also, during the 2013 Aquatic Operations Assessment, conducted by the consulting firm of Counsilman-Hunsaker, UH students participating in focus groups also identified Wi-Fi as one of the needs for the outdoor leisure pool. Students further identified this as an amenity that would contribute to increased student use by giving them the ability to use the space to relax and unwind, as well as study.

The lack of Wi-Fi also impacts events hosted in the facility by student organizations and other groups, as well as inhibits efficiency with CRWC daily operations. While the CRWC is a popular facility for student organizations and departments to host events including Cat’s Back, benefit fairs, career fairs, orientation check-in, tournaments, Special Olympics, and swim meets, events that require internet access must either find an alternate location or request that temporary routers be installed to accommodate the function or event. While this is possible, it poses a challenge and drives up the direct cost to the end user.

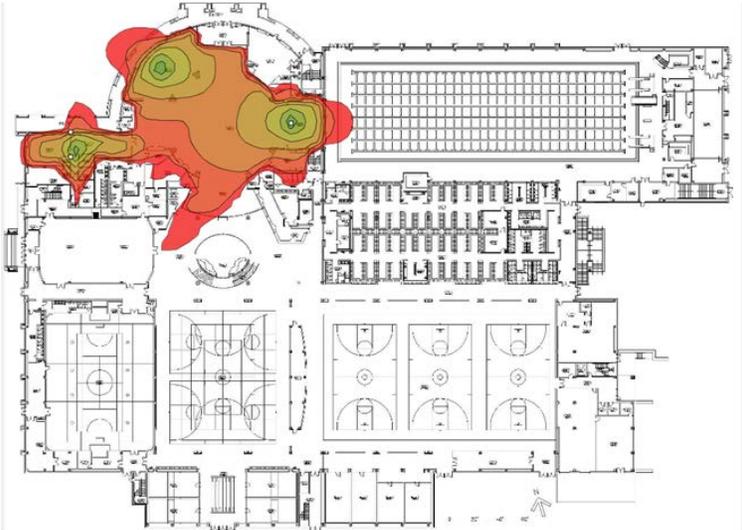
Campus Recreation has worked with UH IT to identify current Wi-Fi usage patterns within the CRWC, analyze current and potential coverage and use if Wi-Fi was expanded, as well as to provide a quote to expand the service throughout the facility and at the leisure pool. Data from UH IT’s Wi-Fi data analysis shows that the CRWC:

- Has one of the highest UH Wi-Fi user loads on campus
  - Ranks 1 or 2 depending on station count
  - Ranks 1 or 2 based on Throughput
  - Ranks 1 or 2 with number of lost transmissions
- Existing Wi-Fi access points are frequently overburdened and cannot handle the traffic during peak times, resulting in poor service
- Existing Wi-Fi access points are not recommended to support more than 50 clients and they currently have almost double that during peak usage

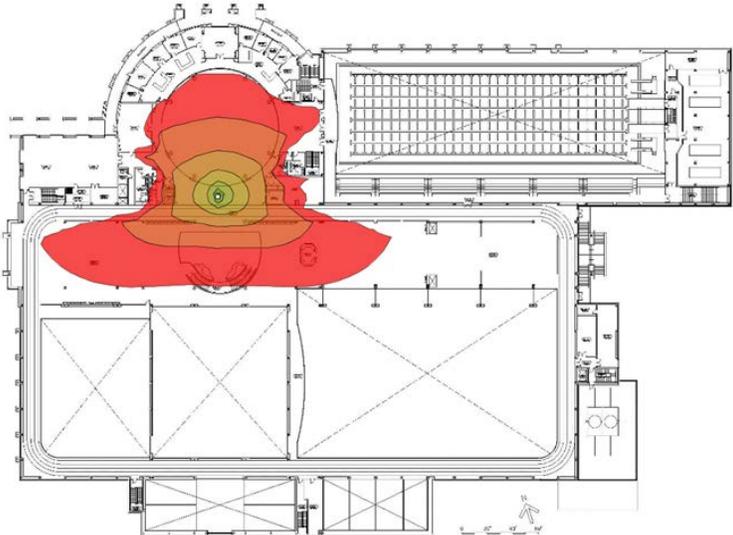
Current and projected coverage maps follow that show the difference based on the UH IT analysis, recommendations and quote.

**Current Wi-Fi Coverage in CRWC**

First Floor



Second Floor



## Predicted Coverage with Upgrades

First Floor



Second Floor



The projected cost to expand and improve the Wi-Fi access throughout the CRWC and the leisure pool is just over \$70,000; the attached budget was developed based on an itemized quote from UHIT. Additionally, the upgrade would provide improved service by providing a stronger signal and additional access points.

The Department of Campus Recreation strives to provide the highest quality facility and services that support student success, enhance the quality of programs and events, and support sustainable initiatives. Based on feedback from students and UH IT's data analysis, Campus Recreation is confident that the expansion of Wi-Fi throughout the facility and leisure pool would enhance the overall student experience within the Campus Recreation and Wellness Center; therefore, this proposal is submitted for consideration.

## CRWC Wi-Fi Project Budget

QTY	PRODUCT #	DESCRIPTION	UNIT PRICE	AMOUNT
25	AP832i	Dual-radio 3x3 3-stream 802.11n AP, integrated antennas, suspended ceiling mount, other mounting brackets optional mounting bracket	\$ 686.35	\$ 17,158.75
1	SUP3-MCx000-SD-25AP	7x24x365 TAC, L1, L2 & L3 Software Support, upgrades, patches. Duration 3 years.	\$ 1,132.20	\$ 1,132.20
1	MCx000-SD-25AP	MC3200/MC4200/MC6000 25 AP Software Upgrade License	\$ 2,117.35	\$ 2,117.35
1	EZRF-NM-25	E(z)RF Network Manager including visualize software license for up to 25 APs.	\$ 1,057.35	\$ 1,057.35
1	Cabling	Triumph run 25 Cat6 cables, test the cables, install the access point, activate and document the floor plans	\$ 12,000.00	\$ 12,000.00
2	Cisco	5 - Cisco FastEthernet Switches (Refurbished) Warranty Information: 10/100mb switches	\$ 1,000.00	\$ 2,000.00
2	WS-C3750X-48PF-S	Cisco Catalyst 3750X 48 Port FULL POE IP Base	\$ 5,695.00	\$ 11,390.00
2	C3KX-NM-1G=	Cisco Catalyst 3K-X 1G Network Module	\$ 215.00	\$ 430.00
2	CON-SNT-C3750X48PF-S	WS-C3750X-48PF-S	\$ 2,522.00	\$ 5,044.00
1	OAP433e	Outdoor Tri-radio 802.11a/b/g/n AP, 3x3:3, antennas ordered separately, one year warranty	\$ 686.35	\$ 686.35
2	ANT-O6ABGN-0606-O	Outdoor Dual Band 2 x 3-Element Omni Directional Antenna with 6 leads, 6dBi (2.4 GHz) 6dBi (5 GHz). For AP300, AP332e, OAP433e and AP832e (OAP433e requires N-Type to RPSMA adapters). For compatibility information outside the United States, please contact a Meru representative	\$ 638.00	\$ 1,276.00
1	AP832e	Dual radio 802.11a/b/g/n/ac AP, 3x3:3, external antennas, lifetime warranty	\$ 686.35	\$ 686.35
1	ANT-O6ABGN-0607-PT	Dual Band 6-lead patch for AP300, AP332e, AP433e, AP832e and OAP433e (OAP433e requires N-Type to RPSMA	\$ 268.40	\$ 268.40
3	ADP-NM-RPSMAM-X6	6-pack. Spare N-Type to RPSMA adapters	\$ 87.12	\$ 261.36
14	CBL3-3RPXSMA	3 Foot RF Extension Cable, RPSMAMALE to RPSMA-FEMALE, Plenum rated	\$ 57.20	\$ 800.80
2	SUP3-MCx000-SD-1AP	7x24x365 TAC, L1, L2 & L3 Software Support, upgrades, patches. Duration 3 years	\$ 64.38	\$ 128.76
2	MCx000-SD-1AP	MC3200/MC4200/MC6000 1 AP Software Upgrade License	\$ 119.25	\$ 238.50
1	EZRF-NM-10	E(z)RF Network Manager including visualize software license for up to 10 Aps	\$ 421.35	\$ 421.35
1	WS-C3750X-48PF-S	Cisco Catalyst 3750X 48 Port FULL POE IP Base	\$ 5,695.00	\$ 5,695.00
1	C3KX-NM-1G=	Cisco Catalyst 3K-X 1G Network Module	\$ 215.00	\$ 215.00
1	CON-SNT-C3750X48PF-S	WS-C3750X-48PF-S	\$ 2,522.00	\$ 2,522.00
1	Cabling	Outdoor cabling - Triumph Cabling System will install one cable for a wireless Access Point located out side by the pool area. Triumph will have to core one hole penetration on the exterior wall for the cable.	\$ 450.00	\$ 450.00
				\$ 65,979.52
		5% Project Management Fee which includes Site Survey, System Design, and Installation Coordination.		\$ 3,298.97
		UHIT Technician Time		\$ 240.00
		<b>SUBTOTAL</b>		\$ 69,518.49
		Admin Charge 6%		\$ 4,171.11
		<b>TOTAL</b>		\$ 73,689.60