



#1

June 18, 2012

City of Los Angeles
Department of Airports
Los Angeles CA, 90074-4989

Date: 6-18-12
Submitted in TCT Committee
Council File No: 12-0859
Item No.: 1
Deputy: M. Espinosa

Re: Boingo Wireless, Inc. – LAX Proposal

On behalf of Concourse Communications Group, LLC (Concourse), a subsidiary of Boingo Wireless, Inc., I am pleased to present this proposal to provide design/build/management services, including a revenue guarantee relationship to the City of Los Angeles (City) for a neutral-host interim Wi-Fi system at Los Angeles International Airport (LAX).

As compared to the Concession Agreement between the City and AWG, our proposal provides a significantly better financial commitment and an improved passenger Wi-Fi experience. Timing is critical in this project, and as a local company we bring a sizeable and skilled workforce to ensure it's done right – and fast. As a publically traded company, and the largest operator of airport Wi-Fi networks in the world, we have the unique expertise and financial resources to deliver.

We are prepared to meet with you in the coming days to negotiate an executable contract, with the explicit goal of expediting free Wi-Fi service at LAX. We have included specific detail regarding our proposal in the following pages. Thank you for your time and consideration.

Sincerely yours,

Zack Sterngold
VP, Business Development - Airports
310-586-5190



LAX at Risk

Though Los Angeles is the Entertainment Capital of the World and hosts one of the largest international airports, LAX is hobbled with a Wi-Fi system built on out-dated infrastructure. For example, the existing Wi-Fi access points reached their end-of-service date on June 19, 2010 and some of the network switches reached their end-of-support date on October 1, 2011. The current system operator, T-Mobile, has announced that they will no longer support the Wi-Fi system at LAX.

The precarious state of the current system, coupled with public pressure to provide free Wi-Fi has caused LAX to negotiate an interim Wi-Fi contract as a stop-gap measure while a Request for Proposals is prepared to solicit competitive bids for a more robust and modern wireless system. Unbeknownst to Boingo or other industry providers, the interim Wi-Fi contract was negotiated with a small, Florida-based company called Advanced Wireless Group (AWG).

The interim Wi-Fi contract with AWG, though generally well-constructed, presents LAX with a number of risk factors. While Wi-Fi systems are based on well-established technology, the proposed implementation at LAX is very complicated as it involves a large network, numerous diverse stakeholders and many unknown variables. These types of Wi-Fi networks require significant troubleshooting and on-site support. The interim Wi-Fi contract includes no commitment for on-site support, no capital commitment, only a very preliminary equipment list and no project schedule. This lack of detail makes it very difficult to predict how much service and infrastructure AWG is willing to provide to LAX. It is questionable that a small, out-of-state company that relies heavily on subcontracted support will provide the City with what it desires when it is not contractually bound to do so.

A Better Deal

Boingo is headquartered in the City of Los Angeles, and LAX is our home airport. We are very motivated to provide high-quality service to our home airport and are willing to substantially improve the economics of the deal to show our support.

To start, Boingo is willing to pay up to 32% more (\$360,000) in payments for the right to provide the interim Wi-Fi service at LAX:

	Year 1	Year 2	Year 3 (Optional)	Total
Boingo	\$400,000	\$500,000	\$600,000	1,500,000
AWG	\$340,000	\$380,000	\$420,000	1,140,000



Boingo will also share 50% of pay-for-use and subscription access revenue, as compared to the 40% provided by AWG.

One of the greatest challenges to providing improved Wi-Fi service at LAX is the outdated infrastructure that supports only very slow internet connections. This infrastructure cannot be used to provide a satisfactory level of free internet service. While AWG has made no commitment to the amount of investment in upgrading LAX infrastructure, Boingo will guarantee a minimum investment of \$800,000, with a maximum investment of \$2.5 million over three years. We will also commit to installing the latest Wi-Fi technology including 802.11n and Hotspot 2.0 compliant (802.11u and 802.11x) equipment that is also upgradable to the coming 802.11ac standard.

One of the most time-critical tasks to implementation of a new Wi-Fi system is commissioning of new broadband connections to provide faster internet access at the airport terminals. This process can take months to complete. In this regard, the contract with AWG states that the deadline for this task is to be determined and shall be based on "information such as usage of the Wi-Fi system, anticipated demand on the system's capacity, problems with existing infrastructure necessitating equipment repairs and other related information". There are no other schedule considerations in the contract.

In anticipation of the imminent need for an interim Wi-Fi system at LAX, Boingo ordered an upgrade of the internet connection at each terminal toward the end of 2011. We received notification that installation of our two T-1 lines at each terminal and three lines serving terminals 7 and 8 was completed in March 2012. These lines are ready for deployment and currently awaiting our activation and testing. This interim solution was meant to provide capacity to sustain the expiring T-Mobile service and requires expansion to suit the desired build-out of free Wi-Fi.

Boingo is also committed to customer information security in a way that is not contemplated in the AWG contract. Protecting personal information is a very serious matter to us. We can provide a robust information security program, with information security policy based on our Payment Card Industry (PCI) and Sarbanes-Oxley compliant status. Boingo also has a registered CALEA compliance plan with the DOJ and is equipped to handle any CALEA and/or Patriot Act required requests.

Only Boingo

Boingo is the worldwide leader in Wi-Fi software and services, providing more airport based Wi-Fi systems than any other company, and serving more than 40% of all North American airport passengers. Not only do we possess specific



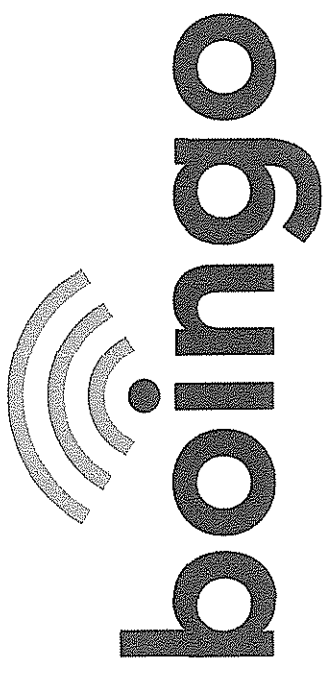
technology that separates us from every other company in the industry, but we are also headquartered right here in the City of Los Angeles. Boingo is a local success story. We were founded here in 2001 and became a venture capital backed start-up. We stayed, we innovated and we grew. We are now a publicly traded company (NASDAQ:WIFI) that provides well-paying jobs and taxes to the local economy, as well as support for philanthropic causes such as the L.A. Mission and Heal the Bay.

Boingo has developed a number of products to enhance the passenger experience. Using location-based technology, our "Around Me" tool helps travelers find dining, shopping and services from the palm of their hand – and drives concession sales at the same time. Our shopping and gaming portals enables passengers to shop or play games online, and the airport earns revenue whenever an online purchase has made. No other Wi-Fi operator – including AWG – can deliver these products.

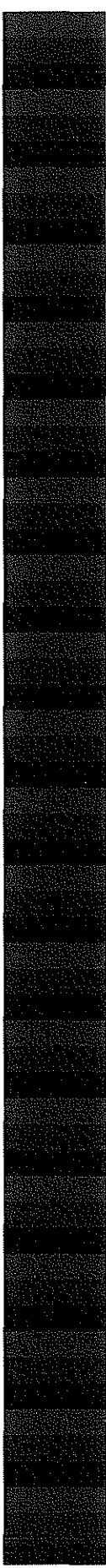
Our corporate headquarters and network operations center (NOC) in Westwood are located approximately 10 miles from LAX. Based on our location, we can provide unmatched expert resources, on-site and on short notice as needed. And due to the complex nature of the project at LAX, we expect this level of assistance will be needed.

We request two days and a good-faith effort from City staff to negotiate a new concession agreement for interim Wi-Fi service at LAX. We are proposing substantially similar terms to those already negotiated while also including the more favorable terms detailed in this letter. If after this expedited negotiation the City does not believe it can obtain a significantly better and legally justifiable deal with Boingo, we will welcome the AWG implementation and await release of the coming RFP.

Also attached to this proposal are mock-ups of a potential web interface for Internet access and a preliminary Wi-Fi network study for Terminal 1 at LAX.



LAX Wi-Fi Passenger Experience



LAX Landing Page

Los Angeles International Airport

boingo



LAX
Los Angeles World Airports

TM

Get Online Now!

Already Have a Wi-Fi Account?
Log In Here.

Username

Password

Wi-Fi Provider

[Access Pass](#)

Connect with LAX



Easily get information about your trip. Discover everything LAX has to offer.

law.a.org

Arrivals

Search for your flight: Flight No. To

Sched.	Flight No.	Dep To	Status	Terminal
18:50	W3101X	LAGOS	AR 22:29	4
18:55	ABS135	EDINBURGH	DE 20:27	5
18:55	BA1455	EDINBURGH	DE 20:27	5
19:25	PK757	LAHORE	DE 20:46	3
20:15	AA6293	DUBAI	DE 21:54	5

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TAKETHEMGEAR

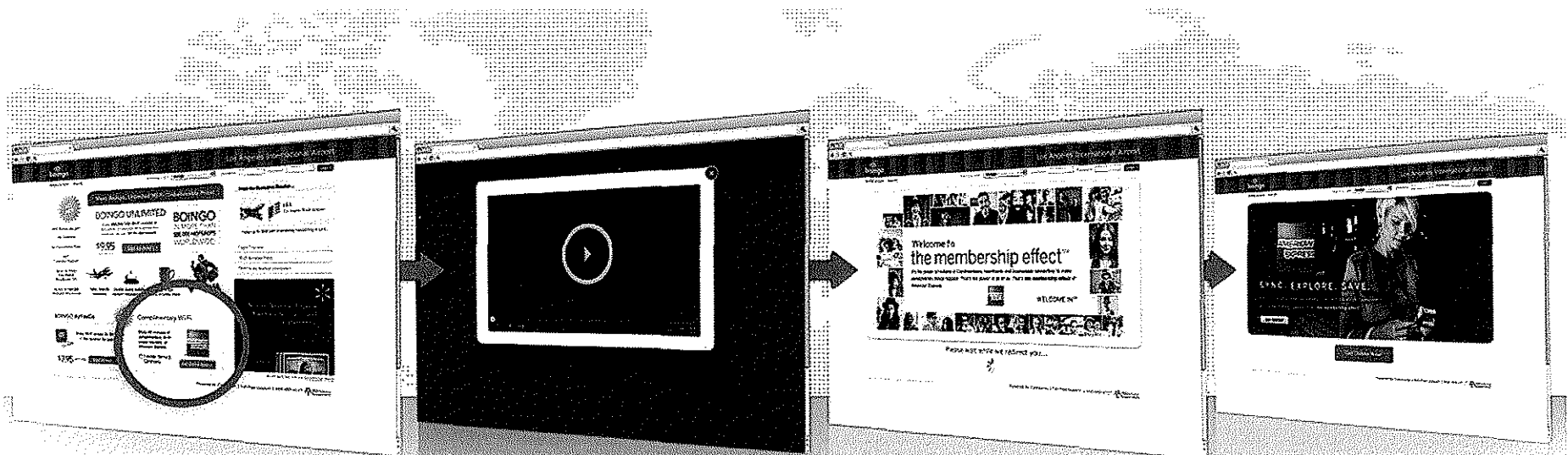


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Wireless   

Sponsored Access Flow Overview



1. Passenger selects sponsored free access from the Products page.

2. Passenger watches a short video (15-30 seconds) from the presenting sponsor.

3. Upon completion of video, passenger is redirected to confirmation page.

4. Passenger begins 45 minute free Internet session.

1. Passenger selects free option

Los Angeles International Airport

Manage Account | [login.org](#)Reaming Login: [Boingo](#) Username: Password: [Login](#)



With Boingo you get...

- No Contracts
- No Cancellation Fees
- 24/7 Customer Support
- Up to 3x Faster than Mobile Broadband (3G)
- Access to 500,000 Hotspots Worldwide

Meet Boingo. Unlimited Wi-Fi. Unbelievable Price!

BOINGO UNLIMITED

Enjoy **UNLIMITED Wi-Fi** access at thousands of hotspots throughout the Americas for just **\$9.95 per month**.

\$9.95 per month [Sign Up Now!](#)

BOINGO IN MORE THAN 500,000 HOTSPOTS WORLDWIDE!

500+ Airports Worldwide 25,000+ Hotels, Including Marriott® & Sheraton® & More Plus 70,000 Cafes & Coffee Shops

From the Executive Director...

 **LAX**
Los Angeles World Airports

Keep up to date with everything happening at LAX.

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[Wi-Fi Access Pass](#)

[Search for Boingo Hotspots!](#)

BOINGO AsYouGo



Enjoy Wi-Fi access for **24 hours** in this location for just **\$7.95**.

\$7.95 per day [Sign Up Now!](#)

Complimentary Wi-Fi

Enjoy 45 minutes of complimentary Wi-Fi access courtesy of American Express.



☐ [I accept Terms & Conditions](#) [Get Online Now!](#)

Because American Express Cardmembers can travel on their terms.

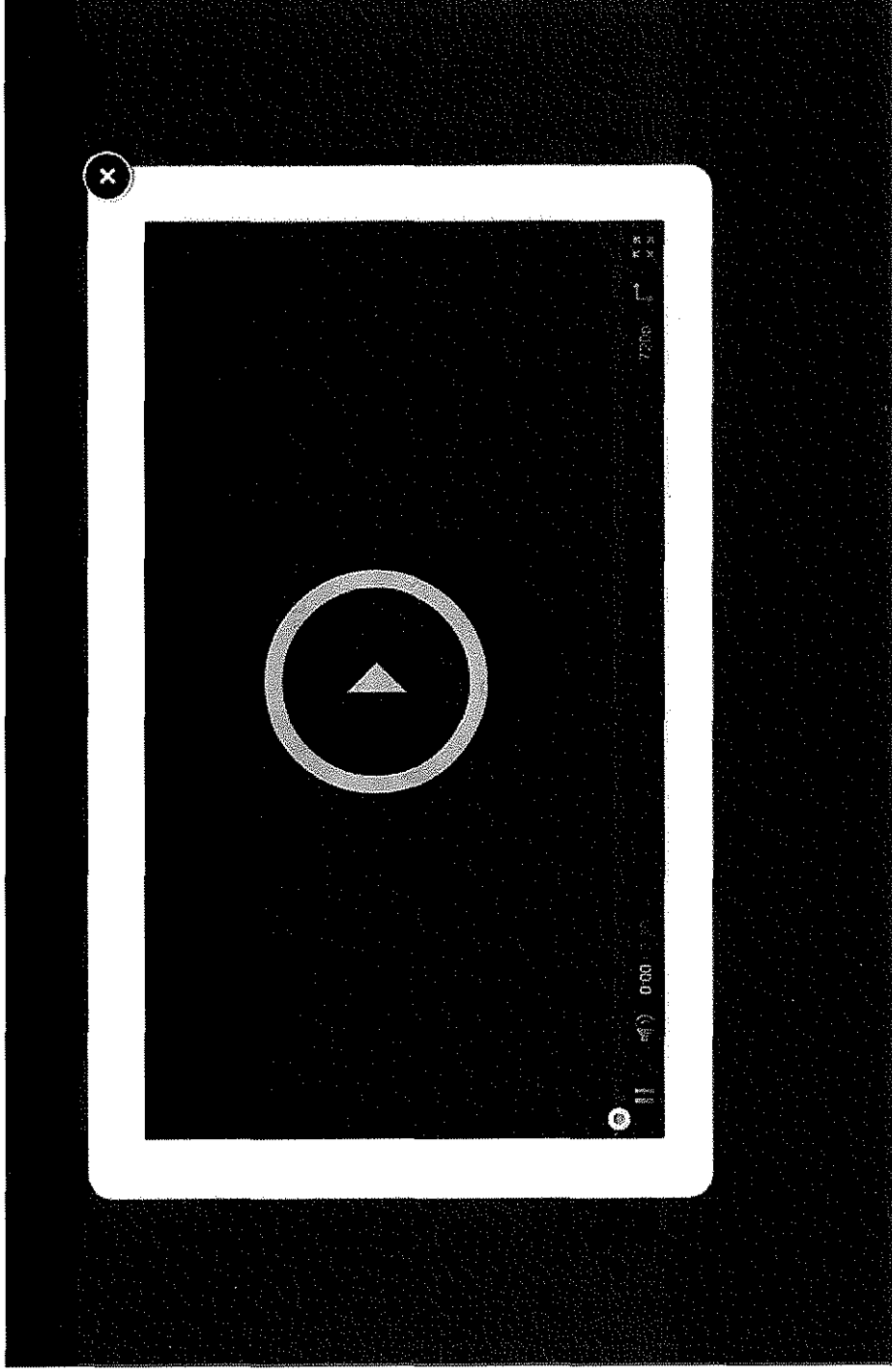


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2. Passenger watches video clip



3. Passenger is authenticated

The screenshot shows the Boingo website interface for Los Angeles International Airport. At the top, the Boingo logo is on the left, and 'Los Angeles International Airport' is on the right. Below the logo is a 'Manage Account' link and the URL 'boingo.org'. In the center, there's a 'Remember Me' checkbox, a 'Boingo' logo, and fields for 'Username:' and 'Password:', followed by a 'Login' button. The main content area is framed by a grid of small photos of diverse people. The central text reads: 'Welcome to the membership effectSM'. Below this, it says: 'It's the power of millions of Cardmembers, merchants and businesses connecting to make extraordinary things happen. That's the power of all of us. That's the membership effect of American Express.' An American Express logo is positioned below the text. To the right of the text is a 'WELCOME INSM' logo. At the bottom of the main content area, it says 'Please wait while we redirect you...' followed by a loading spinner icon. The footer contains links for 'Home', 'Privacy', 'Terms', 'Contact Us', and 'P.A.Q.', along with the text 'Powered by Concourse | Toll-free support 1-800-880-4117' and the 'Wireless' logo.


4. Passenger gets online



Manage Account | Sign Out

Los Angeles International Airport

Reconnect Login:




SYNC. EXPLORE. SAVE.
Sync your eligible American Express® Card with Facebook, foursquare and Twitter to enjoy savings. That's the membership effect™.

Get Started

Get Online Now!

Home | Privacy | Terms | Contact Us | FAQ

Powered by Concourse | Toll-free support 1-800-880-4117 

Home Page when no sponsor present

 Los Angeles International Airport

Manage Account | [laxbo.org](#) Reaming Login: [Boingo](#) Username: Password: [Login](#)



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- No Contracts
- No Cancellation Fees
- 24/7 Customer Support
- Up to 3x Faster than Mobile Broadband (3G)
- Access to 500,000 Hotspots Worldwide

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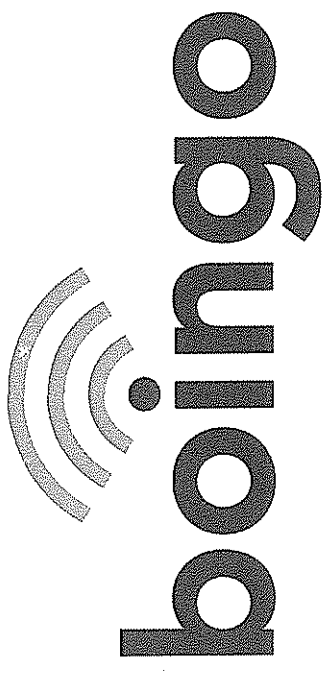
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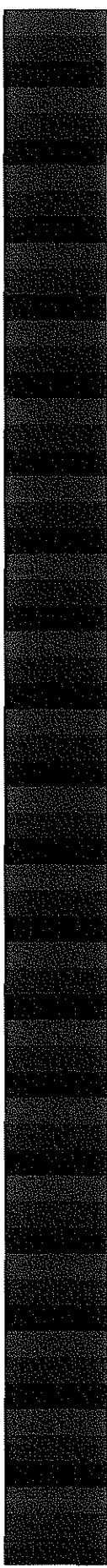


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Dynamic Passenger Experience



Traveler Tools: "Around Me"

- **Around Me** makes it easy for passengers to navigate the airport
- Location-based technology enables a passenger to discover dining and shopping near their gate
- **Flight Tracker** built in so a passenger can monitor their flight from the palm of their hand
- New features coming soon: Weather, SMS alerts for gate changes
- Helps drive concession sales



"Around Me" At-A-Glance



Passenger selects
"Around Me" from
landing page



Passenger inputs their flight
data to receive real-time gate
information and flight status



Based on location,
Around Me lists eateries, shops
and services nearby

Boingo Shopping Center

- Complimentary access to popular shopping sites
- When a purchase is made, airport receives a portion of the revenue through an affiliate program

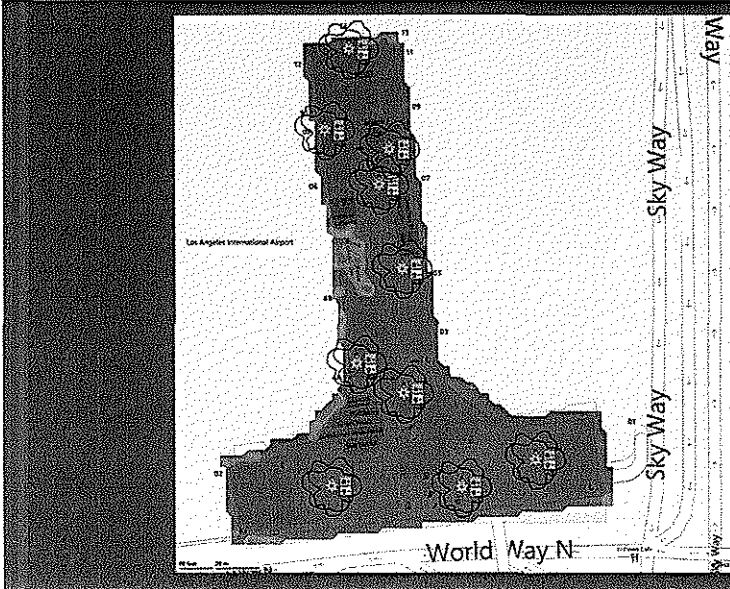


Boingo Gaming Portal

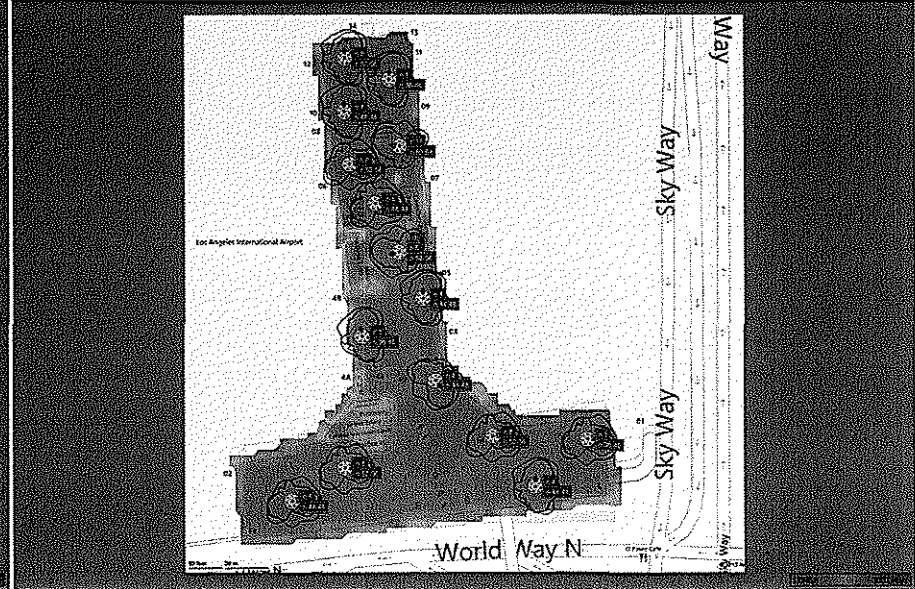
- Complimentary access to popular online games
- When a purchase is made, airport receives a portion of the revenue through an affiliate program



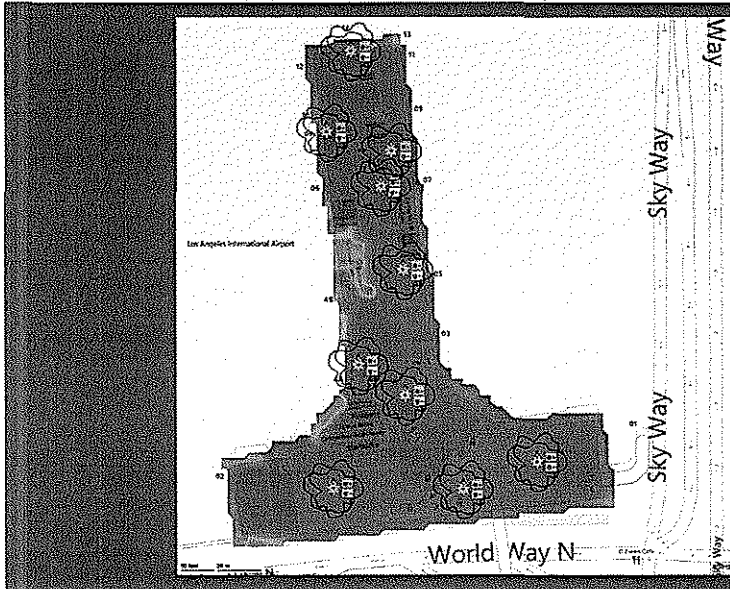
Predicted Client Data Rates (max 54 Mb/s) – T-Mobile Network



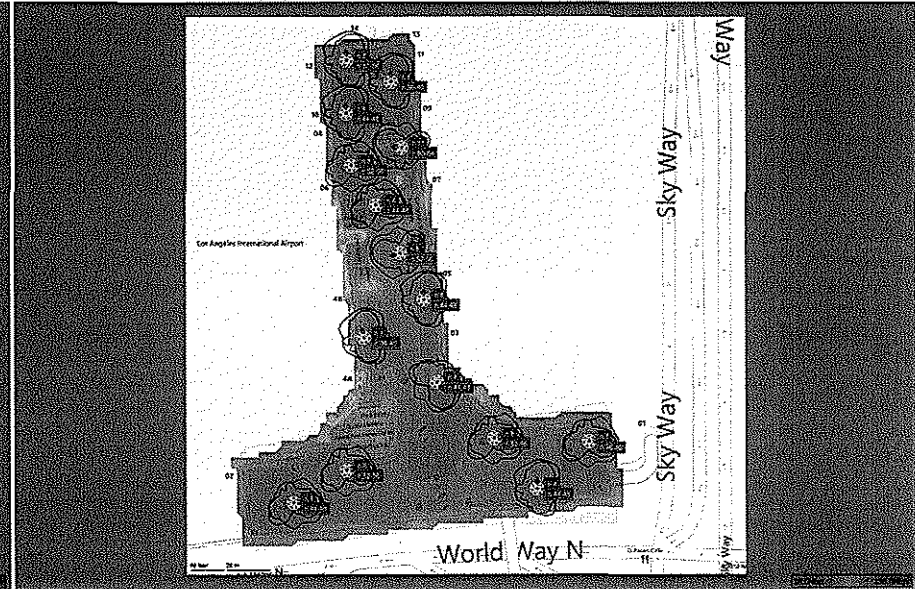
Predicted Client Data Rates (max 300 Mb/s) – Boingo Upgrade



Predicted Max Throughput Rates (max 26 Mb/s) – T-Mobile

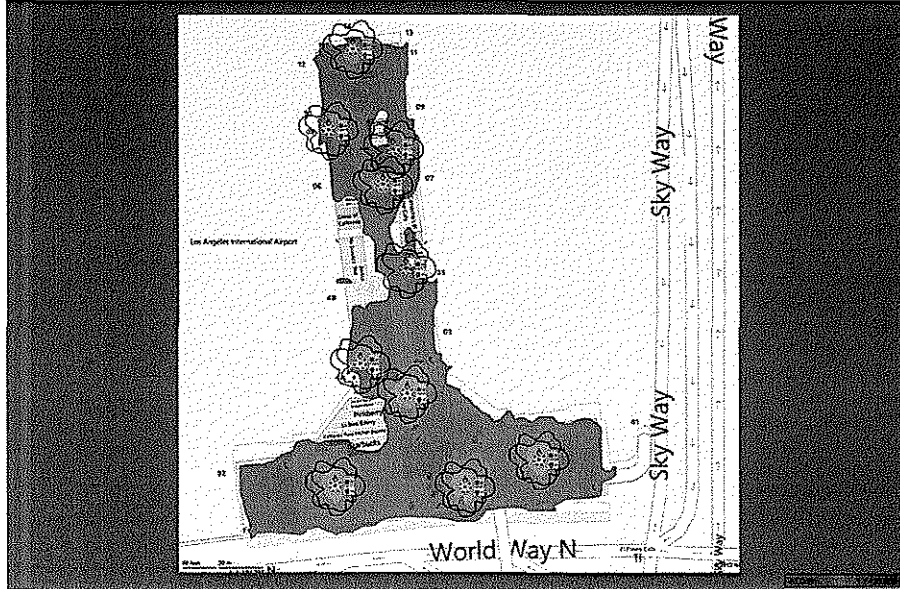


Predicted Max Throughput Rates (max 150 Mb/s) – Boingo Upgrade

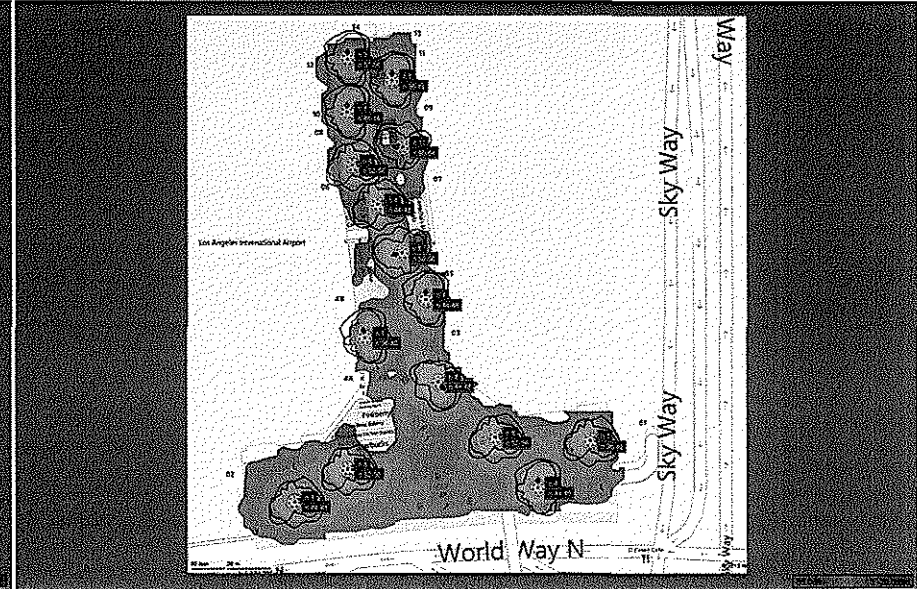


NOTE: Both networks provide good max data rates and throughput, but the legacy network is limited to a max data rate of 54 Mb/s, whereas the upgraded network max data rate is ~5.5 times as fast. This also applies to the payload throughput as well, 26 Mb/s versus 150 Mb/s.

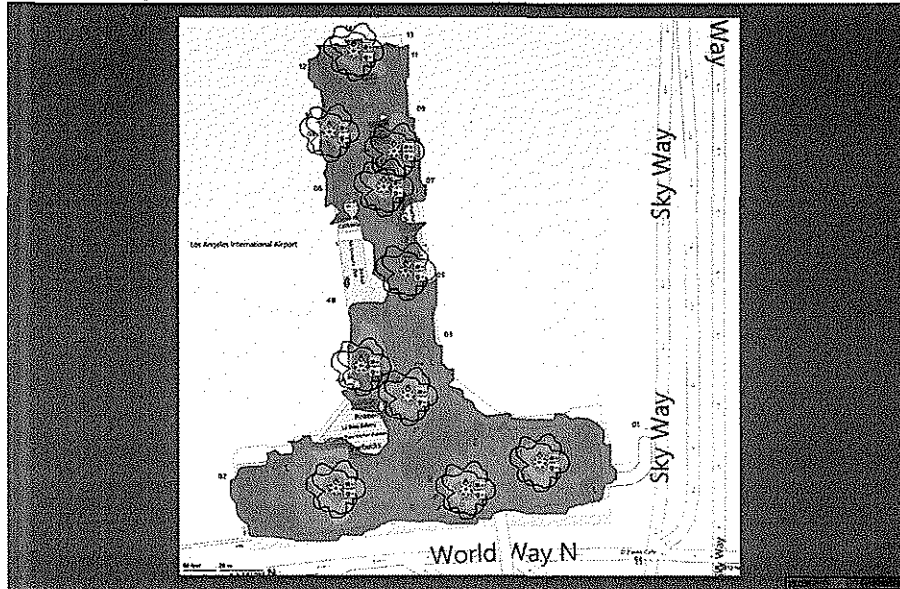
Predicted Receive Signal Strength (max > -20 dB) – T-Mobile Network



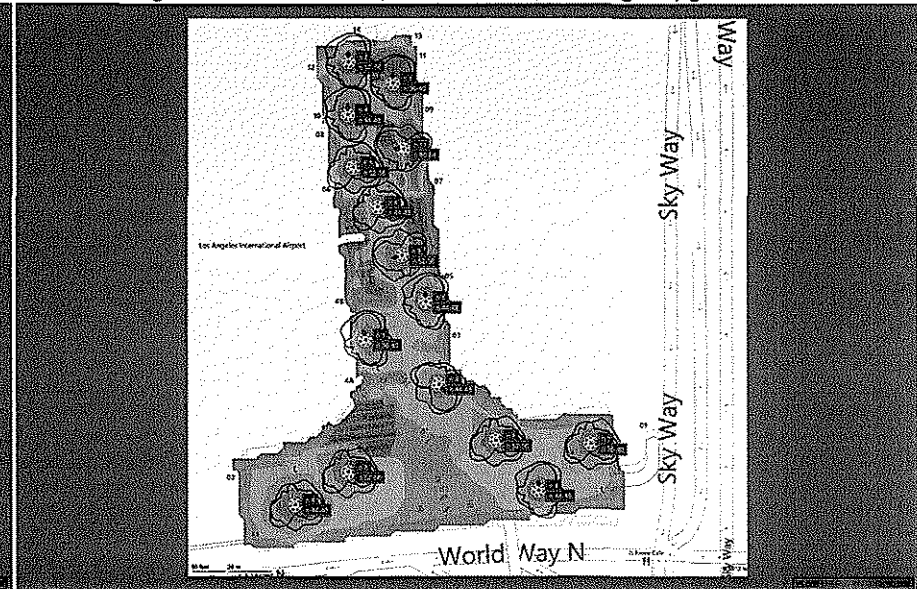
Predicted Receive Signal Strength (max > -20 dB) – Boingo Upgrade



Predicted Signal-to-Noise Ratio (max > -50 dB) – T-Mobile Network

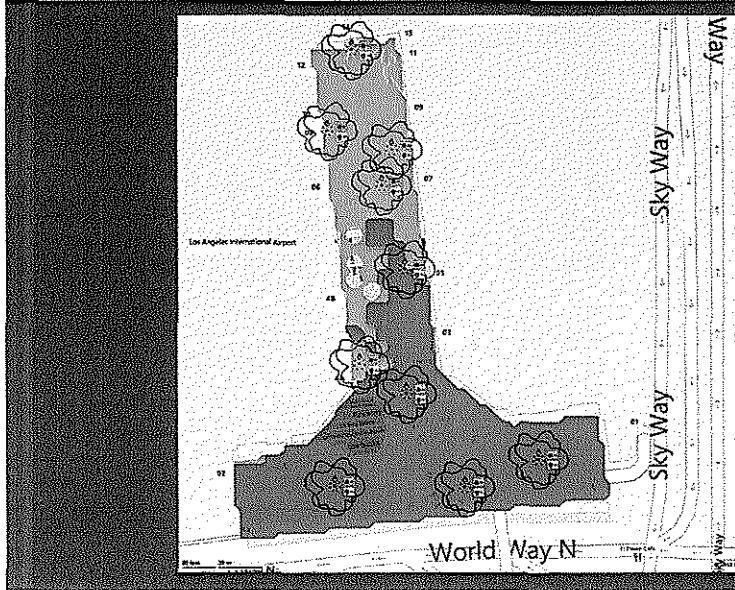


Predicted Signal-to-Noise Ratio (max > -50 dB) – Boingo Upgrade

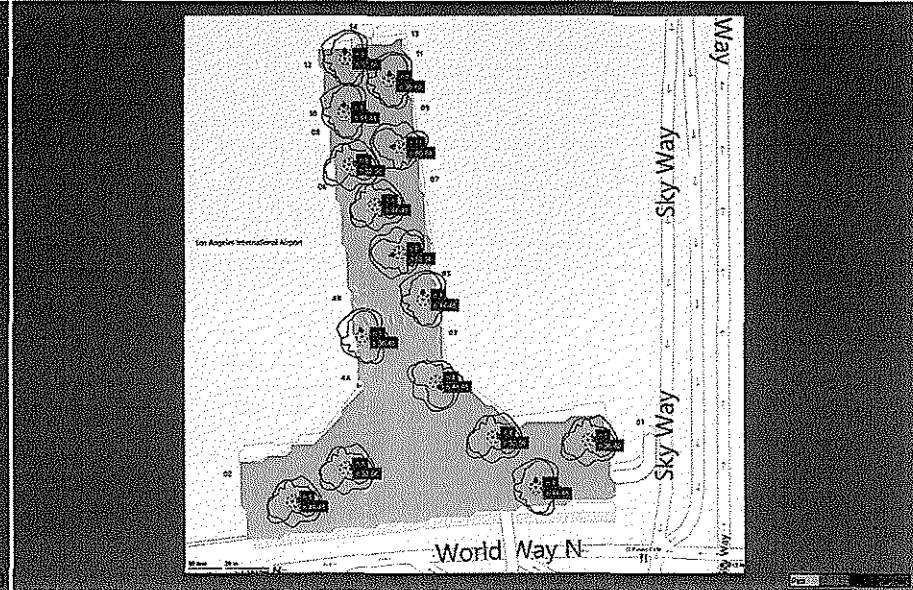


NOTE: The legacy network provides relatively good signal coverage, but in some public areas there is limited to no coverage, and therefore poor signal-to-noise (SNR) ratio (note sufficient signal to connect to the network, whereas the upgraded network has improved signal coverage and greater SNR in these areas, and overall, to allow for much improved connection to the Wi-Fi network.

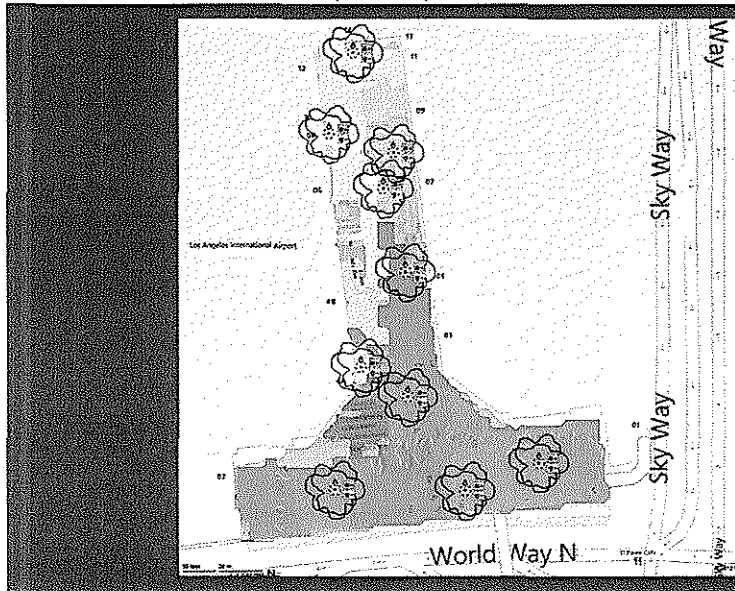
Predicted Capacity Health (P/F) – T-Mobile Network



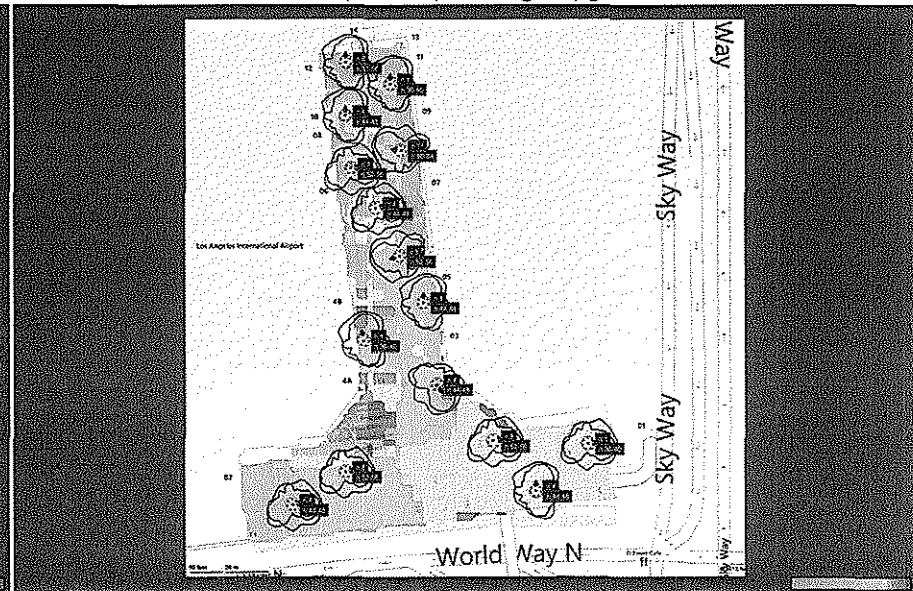
Predicted Capacity Health (P/F) – Boingo Upgrade



Predicted Associated Clients (max 50) – T-Mobile Network



Predicted Associated Clients (max 50) – Boingo Upgrade



NOTE: The legacy network has poor capacity in the ticketing and baggage claim areas and this bleeds into the gate areas. Lower capacity areas drive passengers to other access points, which lead to saturation of those access points and poor performance. The upgraded network has higher capacity throughout the coverage area, leading to lower associated clients and better overall performance. The maximum load profile is as follows: sixty 802.11n laptops, seventy-five 802.11n Smartphones, one hundred and fifty 802.11g iPhones, and fifty 802.11n iPads.

Notes:

This comparison is based on coverage on the gate level, Mezzanine level, and the baggage claim level, of Concourse 1/Terminal 1 at Los Angeles International Airport. The legacy T-Mobile network access point (AP) locations and counts are known, and accurate as per the latest survey conducted in mid-2011, and are Cisco AIR-AP1231 with dual radio, operating under 802.11 a/b/g. There are ten (10) legacy AIR-AP1231 APs in the model, and fifteen (15) Cisco AIR-3600 dual radio, MIMO antennae operating under 802.11 n in the upgraded network model.

The key limiting factor in the legacy network is the implementation of long-reach-Ethernet (LRE) using the telephony Category 1 copper twisted pair cabling from the Internet connection in each concourse/terminal to the payphone banks to which the APs are tethered. Cisco's LRE technology employs a central LRE enabled network switch typically located in the minimum point of entry (MPOE) of each concourse/terminal, where the Internet connection is terminated, and a remote LRE modem near the payphone banks. LRE network topology allows for speeds of 5 to 15 Mb/s, which is far less than true Ethernet with speed of 10 to 1,000 Mb/s. To remove this limitation, it is recommended that fiber optic cabling be installed between the MPOE and remote telco/data closet or other suitable location. This will allow for truly high-speed connectivity between client Wi-Fi devices and the Internet connection.