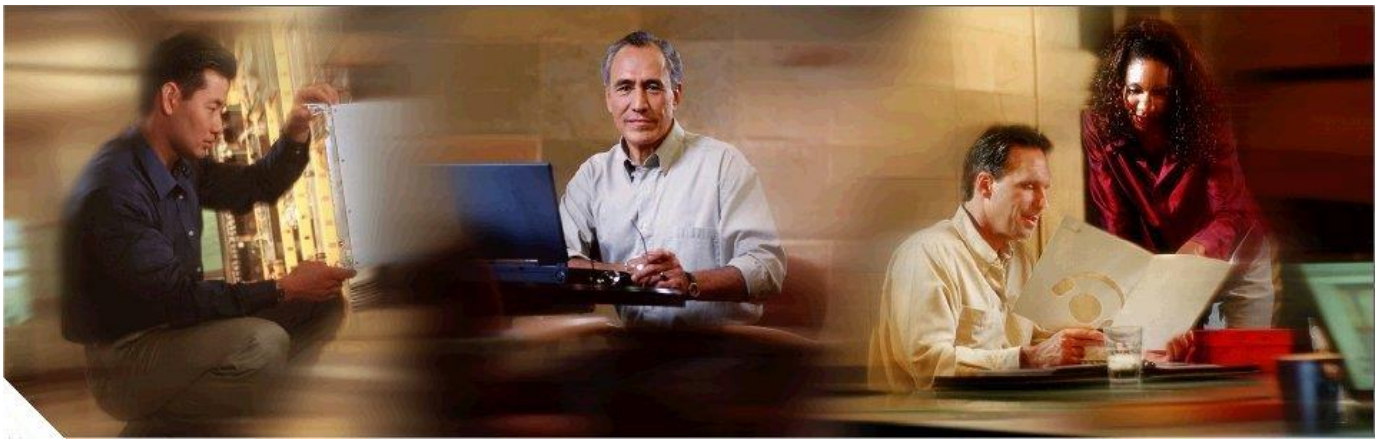

Integrator Name:_____

Property Name:_____

NACE Wireless Site Survey Form

Ver. 2.0

Contents

NACE Wi-Fi Site Survey Introduction

Prior to any NACE Wireless system implementation, a site survey must be completed for the best possible integration and equipment performance. Accurate site and network planning is among the most critical steps in deploying a successful Wi-Fi solution. Failing to complete an accurate site survey can result not only in poor network functionality and spotty coverage, but also leads to overspending on overall infrastructure. Working diligently to correctly survey and plan a network map delivers the best possible performance for both the host and end users alike.

Attached to this introduction you will find a breakdown of steps to complete an accurate survey, useful tools for completing a survey, and a questionnaire pertaining to various aspects of the property undergoing the survey. Following these steps will allow you to more easily plan, design, and deploy a NACE WLAN network for both indoor and outdoor environments.

Pre-Survey Preparation

The first step required by a Wi-Fi integrator performing an accurate survey is obtaining a current floor plan of the property. It is then incumbent upon the integrator to discuss the desired goals with the client such as:

- What areas of the property need Wi-Fi coverage?
- Which areas will be high-volume user areas? (meeting rooms, restaurants, etc.)
- Is coverage required on the exterior of the property?
- What kind of devices/users will utilize the WLAN?
- What applications will run on the WLAN? (think VoIP, Video Streaming, Data)
- Minimum acceptable bandwidth in any given area of the property keeping in mind to accommodate high traffic areas or power-users on the WLAN.
- What type of security is desired for the system?
- Will centralized on site or cloud control be required?
- Verifying the current network infrastructure of the site and taking diligent notes on user experiences in given areas of the property, current Access Point (AP) placement, and successful de-commissioning of any pre-existing wireless network components.

A good general practice for determining bandwidth requirements is as follows:

Application	Target Throughput
Voice	**20 Mbps**
Enterprise Class Data	**15Mbps**
Casual Access	**10 Mbps**
CCTV class per Camera, bandwidth intensive	
Requirements sustained, higher rates:	
MPEG-4, SD	**0.5 – 1 Mbps**
MPEG-2, SD	**2.5 – 4 Mbps**
MPEG-2/4 HD	**Up to 20 Mbps**

Checking for Spectrum Interference

While many potential clients may argue the financial merit of sweeping for spectrum interference, it is essential to do so should a neighboring facility have wireless access points that could potentially interfere with your installation. If you run into some hesitation from the client to run a full spectrum analysis, NACE recommends at least running a program such as NetStumbler while on site to check for any outside AP interference (be sure to check for signal strengths of at least 30% and notate them as problematic). Using an application such as NetStumbler, take note of interfering access points and corresponding packet loss. If significant packet loss is noted, detail to the client that a full spectrum analysis of the entire property should be conducted as more interference will hinder access point performance.

Site Survey Tools

Having the correct tools to successfully complete a site survey is as important as the survey itself. An integrator performing the initial site survey must have to proper tools in hand to test signal integrity/throughput after placing a wireless access point. First and foremost, an integrator should have in-hand:

- A wireless device (cell phone, tablet, laptop) capable of detecting and supporting all radios (a/b/g/n/ac)
- Software capable of measuring Wi-Fi signal strength at any given area of the property to test for signal distance and dead-zones
- A copy of the property's floor plan
- A network diagram of any previously installed wireless infrastructure
- Interior/Exterior construction material breakdown
- Copy of current electrical considerations
- Measuring tape, stud-finder, and ancillary devices for measuring wall/ceiling/floor density and materials

Site Details

Please complete to the best of your ability the following site detail table. Mark any sections that are not applicable as "N/A". If the provided space is insufficient for any information, please include on a separate piece of paper and provide it back to NACE at the completion of the site survey.

Site Details

1. What is the site location/name?	
2. What is the site IP address that will supply bandwidth to the WiFi system?	
3. What is the site address?	
4. What is the shipping address? (if different from the above)	
5. Who is the site contact?	Name: Title: Telephone: Mobile: Email: Out of hours contact number:
6. Is this site owned and maintained by the customer?	Yes/No: If No, please list primary contact: Who:
7. What are the hours of operation?	

8. What is the number of the telephone nearest to the WiFi controlling equipment and its location?	Telephone: Location:
9. What are the building and room access procedures? (For example, must visiting personnel be escorted by customer personnel?)	
10. Are there any special security/safety procedures? (such as safety glasses, safety shoes, and hard hat areas)	Yes/No What:
11. What is the name and number of the site coordinator who is responsible for ensuring that the site is prepared adequately for the installation of the NACE WLAN equipment?	Name: Telephone:
12. What is the location of the IT cabinet?	Floor: Room: Position:

If possible, please include a proposed Site Layout in addition to the Site Details form. This will only assist NACE in creating a more accurate Wi-Fi Heat Map of the site for access point deployment.

Electrical Considerations

Please complete as comprehensively as possible the following Electrical Considerations table. Mark any sections that are not applicable as "N/A". If the provided space is insufficient for any information, please include it on a separate piece of paper and provide it to NACE at the completion of the site survey.

Electrical Considerations

1. Is the correct AC power source available as a dedicated shielded circuit?	Yes/No Voltage range: Location:
2. Will the wireless equipment be powered by a UPS (AC) or battery backup (DC)?	Yes/No UPS/Battery
3. Does the backup power source have sufficient capacity for this new equipment?	Yes/No Capacity:
4. Does this site have additional backup from generator power?	Yes/No Details:
5. Are there any restrictions as to when the NACE WLAN equipment might be powered up?	Yes/No Details:
6. Is there an isolated earth-ground point available close to the NACE network equipment position?	Yes/No Distance: Location:

In addition to the previous table, please detail as comprehensively as possible the current state of the electrical Earth-grounding on site and attach it to the completed site survey. If the property manager or maintenance personnel have an Earth-ground diagram or relevant documentation, please obtain a copy and provide it to NACE for records. Failure to properly ensure an electrical ground can result in damage to the equipment or danger to the integrator.

Peripheral Data Communications Equipment

Please complete as comprehensively as possible the following Peripheral Data Communications table. Mark any sections that are not applicable as "N/A". If the provided space is insufficient for any information, please include it on a separate piece of paper and provide it to NACE at the completion of the site survey.

1. What type of data communications CPE will be connected to the NACE equipment at this site? (such as a broadband or DSL line, VoIP hub, or any other telecommunication lines)	**Customer Device ID**	**Manufacturer/ Model**	**Interface/Cabling**
2. Please use this area for any special instructions regarding Peripheral Data Communications Equipment or Configuration			

Broadband Infrastructure

Please complete as comprehensively as possible the following Broadband Source table. Mark any sections that are not applicable as "N/A". If the provided space is insufficient for any information, please include it on a separate piece of paper and provide it to NACE at the completion of the site survey.

1. Is the Broadband Internet source Managed or Unmanaged? Who is the Internet Service Provider? Please detail.	Service Provider: Service Provider Contact Info: Managed or Unmanaged Broadband:
2. What type of Broadband Modem is currently on site? Please list the manufacturer and model.	Modem Manufacturer: Modem Model: Modem Location:
3. Is the incoming modem connection Cable, DSL, Fiber, Broadband over Powerline (BPL), Satellite?	Incoming Broadband Connection:
4. On which frequency is the modem currently broadcasting?	Frequency range (MHz): If using DOCSIS, send and return path frequencies for CMTS:
5. Please detail the existing wired Ethernet hub infrastructure (if applicable).	Managed or Unmanaged Ethernet: Brand and model numbers of switches: Backbone bandwidth capability (10/100 , 100/1,000, 1,000-10,000): Location of Ethernet equipment:
6. Are there any access restrictions to the current LAN equipment?	Yes/No Details: If Yes, what are access protocols:
7. What is the estimated amount of users at maximum capacity?	Maximum Users:

8. What type of users will generally utilize the NACE WLAN?	Please detail (VoIP, Data, Video Transmission, Power Users, etc.):

Environmental Considerations

Please complete to the best of your ability the following environmental considerations table. Mark any sections that are not applicable as "N/A". If the provided space is insufficient for any information, please include on a separate piece of paper and provide it back to NACE at the completion of the site survey.

Environmental Considerations

1. What are the materials used in building construction?	Please detail (Cinderblock, Drywall, Brick, etc.): Interior Material: Exterior Material:
2. What is the general layout of the site in terms of floor plan?	Please detail (Open floor, cubicles, offices, concrete meeting rooms, etc.):
3. What is the height of the highest and lowest points of the property's ceiling?	Please detail: Common Areas: Offices/Rooms:
4. What are the dimensions of the largest and smallest areas requiring WLAN coverage?	Please detail:

5. Will this property require outdoor Access Points for swimming pools, recreational areas, fitness areas, etc.?	Yes/No Details:
6. Please specify areas that require high-density coverage or those that do not need coverage.	Please detail as specifically as possible:

Site Survey Completion

System Description: <Customer Name and Project Name>

Site Survey Document Version: Ver. 2.0

The attached site survey has accurately captured the status of pertinent physical, electrical, and environmental requirements for all Alcatel equipment to be installed at <Customer>_____ premises at <Property Name>_____.

The included details have been examined, completed, and agreed actions have been recorded for all sections.

For and on behalf of NACE, INC:

Name (print): Signature: Date:

For and on behalf of <Customer>_____:

Name (print): Signature: Date:

Signatures required prior to NACE Engineering architecting a system and creating a Bill of materials (BOM)

Comments or variations (list below):

Technical Site Survey:Fill in *ALL* applicable boxes. Incomplete surveys will result in a delay, as the survey will be sent back for completion. ****Network issues cannot be solved with a Alcatel wireless installation. Please ensure onsite equipment is designed to handle proper throughput.****																				
Company Name:																				
Property Name:												Property Address:								
Type of Business:			Number of Rooms:									Ceiling height in rooms:			Business Center Coverage:			Back Of House Coverage:		
Exterior Construction Material:					Interior Construction Material:							Outdoor AP's required:			Outdoor Pool Coverage:			Fitness Room Coverage:		
Location of room restrooms:					Restroom Construction Material:							Ceiling height in common areas:								
Copy of floor plan provided:		**Floor plan needed for wireless heat map simulation**																		
Copy of network diagram provided:		**Network diagram needed for sufficient bandwidth determination**																		
Network Switch Type:					Maximum # of Hops:							Current AP Placement			Expected number of connections:					
Current # of AP's			Type of Coverage:					Type of users:					Type of signal:							