



MERU WIRELESS SITE SURVEY

1. SCOPE OF WORK

The site survey is a key part of the planning and design process in preparation for the installation of a wireless network that addresses the customer's design criteria, at the minimum cost.

There are three parts to the survey process:

- Agree and Document the functional specification.
- Visit site to perform the survey.
- Document the survey results.

a) **Agree and Document the functional specification.**

The network must meet the requirements of the organization that commissions it, however that organization may not have the expertise to specify technically what it requires, in a practical manner. Siracom helps produce a specification document that identifies the commissioning organization's requirements and provides a quantitative delivery specification. The specification will include:

- Areas to be covered by wi-fi
- Minimum connection speed to be achieved in each area to be covered
- Expected user densities in each area to be covered
- Applications to be delivered and service levels to be achieved in each area to be covered
- Frequency bands to be supported
- Standards to be supported
- Resilience expectations
- Aesthetics

b) **Visit site to perform the survey.**

Our consultants will visit site to perform a survey. They will be equipped with site survey tools including: Meru Controller, Meru Access points (AP320, AP320i AP1000 as appropriate), Wi-Spy Spectrum Analysis tool, Ekahau Site Survey tool

When on site the consultant will:

- Use the spectrum analysis tool to measure the background radio noise, both wi-fi and non wi-fi.
 - Note sources of interference and recommend methods of mitigation
 - Make recommendations for the best channel(s) on which to deploy the wireless network
- Use the site survey tool to assess the access point requirement
 - Number of access points required
 - Recommended access point locations

- Taking into account aesthetics, cabling and power.
- Identify obvious health and safety issues which may affect the installation process
- Identify requirement for equipment to work at height during installation

If requested our consultant may also:

- Assess whether there is space in the comms cabinet for the controller (height and depth)
- Assess whether the wired network infrastructure is in place to support the wireless design
 - Cable outlets
 - Switch Ports
 - POE
- Provide further information including measurements of
 - Signal strength coverage
 - Signal-to-noise ratio
 - Data rate
 - Number of access points (overlap)
 - Strongest access point (roaming, load balancing)

c) Document the site survey results

A document will be produced containing the following sections:

- Functional Specification
- Spectrum analysis and recommendations
- Controller and Access point numbers and locations
- A quotation to the reseller if requested
- Health and safety issues noted
- Supporting network requirements
- Appendices
 - Output from spectrum analyser
 - Output from Site Survey Tool



2. PRE-SURVEY QUESTIONNAIRE

Background Information

Reseller		End User	
Reseller Contact		Vertical Market	(ie primary school, warehouse)
Phone Number		Contact	
Email Address		Address	
Survey date			
Doc due date			
		Phone Number	
		Email Address	

Health and Safety

Detail any health and safety requirements for visiting consultant.

Siracom will need the following items before we can begin:

Customer to provide details of	Siracom Tasks
A building plan as a PDF, .GIF or JPEG to scale.	Import to EZRF coverage planner
A description of the internal and external wall types	Add to plan
A description of aesthetic requirements	Select AP type and location ie wall mount, ceiling mount, above ceiling mount. Note any special antenna requirements
A description of any "special" environments or requirements	Warehouses, outdoor coverage, auditorium etc.

We will agree the following during a phone call:

Customer to provide details of	Siracom Tasks
Coverage User density details Areas of very high user density (50+) Areas of high user density (25+) Areas to be covered with 2.4GHz Areas to be covered 5GHz Areas where coverage is not required	mark up plan add APs required for performance reasons
Describe standards to be supported (802.11a,b,g,n)	Add radio spec
Describe AP resilience required	Produce AP resilience coverage plans
Describe the controller resilience required	



Describe the applications to be supported Basic connectivity Email/ Web Video High speed/ high usage High speed connectivity Latency sensitive applications Location services Voice (Cisco/Polycom/Vocera) WIDS/IPS sensors	
Known interferers Alarms Microwaves RF Security Cameras Existing Wi-fi	
Wired Network Infrastructure Describe switch infrastructure Anticipated cabling requirements Cabinet location	

3. NOTES

The site survey is produced using readings taken at the time of the survey, and using the information given in the pre-survey questionnaire. The results are affected by changes to the RF environment such as new construction, movement of some kinds of furniture, relocation of partitioning, even opening and closing of doors. Similarly, we can only measure interference that is present at the time of the survey.

We try to make our surveys accurate and “Fit for purpose” but do not accept liability should changes to the specification be required.