

Site**FORGE**

SITE SURVEY

NETWORK PLANNING AND DESIGNING TO
DELIVER AUTOMATED SOLUTIONS

USE CASE

DOCUMENT INFORMATION

ABSTRACT

This document details a use case on Site Survey. This document details the processes involved with Site Survey.

REVISION HISTORY

Revision 1.0	Initial document creation	2016-09-01
Revision 1.1	Added steps in basic flow	2016-10-11
Revision 1.2	Updated use case diagram	2016-11-22



BRIEF DESCRIPTION

PLANNING AND DESIGNING A WIRELESS NETWORK DELIVERING AUTOMATED SOLUTIONS THROUGH SITE SURVEY ACCOMPLISHING EXPANSION, CAPACITY AND QUALITY PROVIDING EFFICIENT NETWORK UTILIZATION – WITH SITEFORGE.

Planning for a Wireless Network is not an easy task. There is a chance of co-channel interference with many access points that are placed nearby. The importance of Site Survey is crucial here because this assists the planning and designing of an efficient Wireless Network Setup providing efficient network utilization.

This process assures that the site offers optimum network coverage to the traffic load, there is no co-channel interference and that the design serves intent performance to serve the consumers better. Site owner gains control of the multifaceted process, construction cost, reduce operational problems, and ready site to make it compliant.

ACTORS

- ▶ Field Engineer
- ▶ Network Planning Manager
- ▶ Survey Engineer

TRIGGERS

- ▶ Growth in data consumption provides insufficient bandwidth
- ▶ Manual data entry is prone to errors or data manipulation
- ▶ Manual parameter check for LSM-R test is time-consuming
- ▶ Tedious process to store, manage, and circulate result data
- ▶ Unable to determine the number of access points and their positions for optimum coverage

PRECONDITIONS

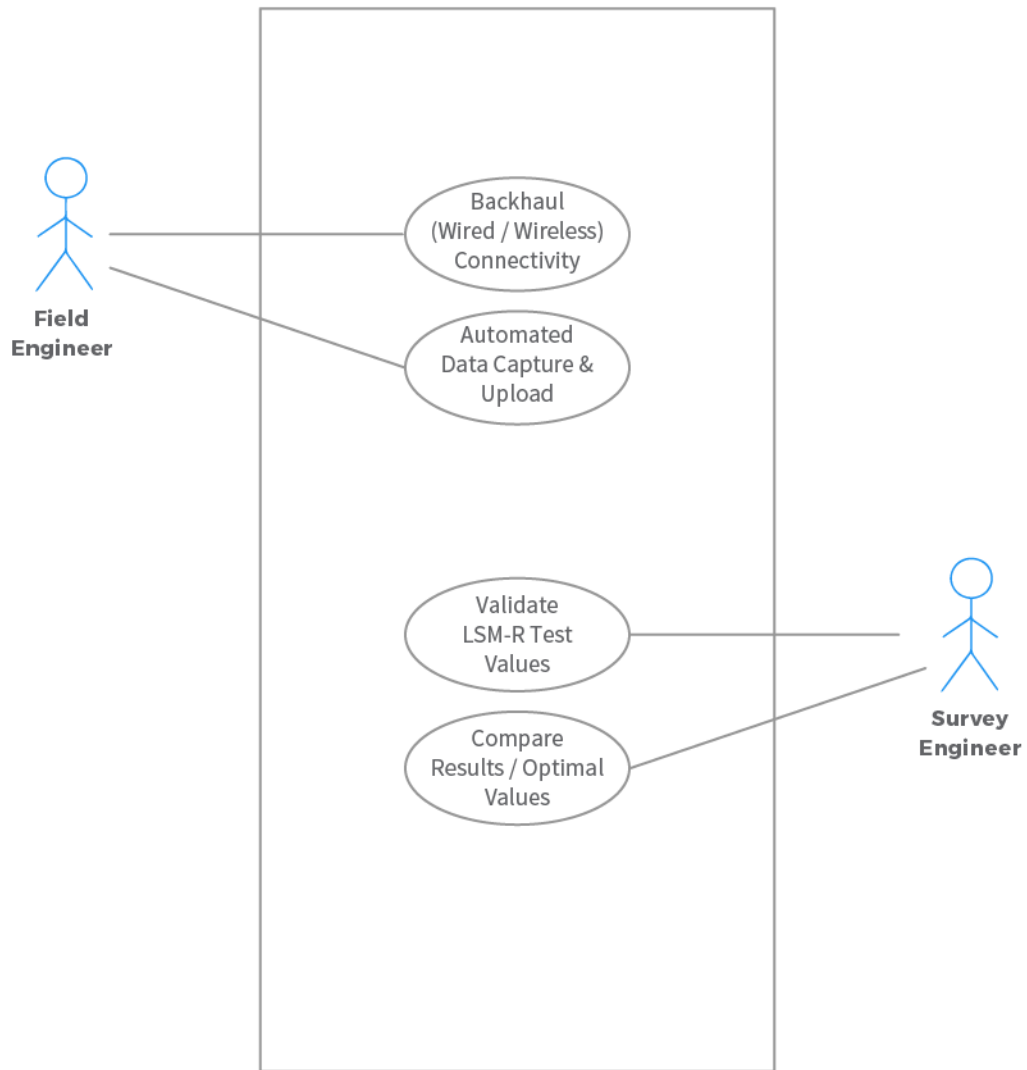
PLANNING

Field Engineer has identified the most suitable site for cell installation and planning is essential as it is an initial step which further facilitates the acquisition and installation of the site. Further, deploying the most beneficial techniques to install the site.

ACQUISITION

The Network Planning Manager has created a site proposal and drawn a framework; thereafter Network Planning Manager seeks approval from government authorities to acquire the site. It basically assists to meet the customer network coverage and program schedule objectives.

USE CASE DIAGRAM



BASIC FLOW

Site Survey

Site Survey is carried out so as to ascertain that the site is ready to provide sufficient network connectivity to the consumers and is able to meet the needs of the customers as well as the operator. **SiteForge backhaul connectivity** service assists in checking the network efficiency of the cell, assuring that it will provide the necessary coverage to the high traffic.

STEP 1

Once the site is acquired, then the Field Engineer conducts **backhaul connectivity test** to inspect and to examine whether the site can efficiently provide the network coverage without any co-channel interference. It examines whether the connectivity has been established or not, inspecting the download and upload speed, checking the performance of the network and determining the position and number of the access points.

STEP 2

Automated data capture and upload facility minimize the risk of data manipulation and error while recording the data.

STEP 3

To validate the LSM-R test values, an automated reporting system is provided to compare the results between result values and optimal values. In addition, the surveyors get clear information and accurate data.

STEP 4

Digital storage facility combines assorted data into a centralized repository that easily stores, manages, and retrieves the data whenever required. The digital data storage provides the essential information that encompasses everything which is required to efficiently install and deploy a site.

CONCLUSION

Numerous variables come into play when the network is not grounded; wherein a site survey is essential while installing a wireless network. Backhaul connectivity helps in increasing the network efficiency with the available equipments. As a result, the cells are deployed at the required location to maximize the network coverage.

SITEFORGE ENSURES SITE SURVEY:

This use case showcases the approach followed by the SiteForge implementing Site Survey to address the challenges faced before installing and deploying the cells. The solution is designed to simplify overall development process of planning and designing the wireless network on the Site. Site Survey conducts an examination of the site to facilitate efficient network coverage whenever required.

The backhaul connectivity analysis is conducted for both wired and wireless network connectivity. For wired backhaul, an analysis is done on optical fibers, whereas the wireless backhaul analyzes different frequency bands. After the identification of right deployment areas, operators are able to significantly improve their network performance.

All the essential things are considered keeping in mind that there is no co-channel interference from neighboring access points. Automated solutions are delivered to provide efficient outdoor and indoor coverage with an efficient bandwidth. **Site survey reduces the site downtime and cuts down the constructional and operational cost within the identified environment.** The use case showcases how SiteForge integrates every aspect with precision considering everything with accuracy and providing automated solutions to deliver efficient network utilization.

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