Cellular Coverage Workgroup

A Hotelier's Guide to Cellular Coverage Solutions

Glossary

Version 1.10

About HTNG

Hotel Technology Next Generation (HTNG) is a non-profit association with a mission to foster, through collaboration and partnership, the development of next-generation systems and solutions that will enable hoteliers and their technology vendors to do business globally in the 21st century; to be recognized as a leading voice of the global hotel community, articulating the technology requirements of hotel companies of all sizes to the vendor community; and to facilitate the development of technology models for hospitality that will foster innovation, improve the guest experience, increase the effectiveness and efficiency of hotels, and create a healthy ecosystem of technology suppliers.

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1 Introduction

The cellular coverage best practices guide is intended to educate hoteliers and hospitality technology management organizations recommending and supporting hotel properties on the fundamentals of cellular coverage solutions. This guide includes an overview of the wireless technologies supported by the cellular coverage solutions, available solutions and their strengths and weaknesses, as well as design, installation and post-installations considerations.

This guide is intended to provide the hospitality IT or telecom manager with a thorough overview and explains the process that hundreds of hotels have undertaken to select and implement a cellular coverage solution. The information is presented in an uncomplicated manner so that it may be quickly grasped for a high-level understanding, while still providing enough depth to support a comprehensive understanding of the technologies, issues, and concerns.

The contents of this guide are provided on the HTNG website in the following sections:

- Solution Architectures
- Design Considerations
- Installation and Post-Installation Considerations
- Glossary

2 Glossary of Acronyms & Terms

1xRTT	3rd generation
3G/4G	3rd generation /4th generation mobile phone services
802.11 a/b/g/n	Very common wireless LAN standards, also known as Wi-Fi
802.16	Family of standards known as WiMAX
As-Builts	Post installation close out package outlining system details & equipment locations
AC/DC	Alternating current /Direct current
AP	Access Point
APC	Angle Polish Connector for fiber optic cable
ATP	Automatic Transfer Protocol
Backhaul	Transport of voice or data communications between distributed sites in a telecommunications network
BDA	Bi-Directional Amplifier - RF device used to receive and amplify RF signals in both the base-to-mobile and mobile-to-base directions
BISCI	Building Industry Consulting Service International
Bluetooth	Wireless standard for short range
BTS	Base Transmit Station in wireless cellular network
BU	Base Unit
Cable Plant	All vertical and horizontal cabling required to support the system
CAD	Computer Aided Design
CAT5/6	Category 5 or 6 cable used to network computers
CATV	Term for low cost coaxial cable often use for cable TV.
CDMA	Code Division Multiple Access
CEO	Chief Executive Officer
Coverage Solution	Distributed Antenna System
dBm	Decibel relative to one milliwatt - measure of RF power
DSL	Digital subscriber line
E911	Wireless 911
EIRP	Effective Isotropic Radiated Power
EMC/EMI	Electromagnetic compatibility or interference is low level radiation, which is emitted by electrical circuits as a by-product of their normal operation and causes unwanted signals (interference or noise) to be induced in other circuits
EMI	Electro Magnetic Interference
EMR	Electro Magnetic Resonance
eNodeB	BTS equivalent for LTE
Ev-Do	Wireless radio broadband data standard
FCC	Federal Communications Commission
FMC	Fixed-Mobile Convergence

GHz	Giga Hertz – measure of frequency
GPRS	General Packet Radio Service –protocol associated with GSM
GPS	Global Positioning System
Greenfield	Previously undeveloped site for commercial development
GSM	Global System for Mobile communications
Head-end	RF terminology for the entry or primary location of a network, often where the network management is centralized
HSIA	High Speed Internet Access
HVAC	Heating Ventilation Air Conditioning
IDF	Intermediate Distribution Frame – A distribution point for multi-pair cables from the main distribution frame (MDF)
IMS	IP Multimedia Subsystems
In-Band	Electrical term used to describe radio frequency signals that are in a particular band of operation
Interference Mitigation	Effort to reduce interference
IP PBX	Internet Protocol Private Branch Exchange
Link Budget	All of the gains and losses from the transmitter, through the medium (free space, cable, waveguide, fiber, etc.) to the receiver in a telecommunication system
ICS	Iranian Cheetah Society
iDEN	Integrated Digital Enhanced Network – wireless protocol
IDF	Intermediate Distribution Frame
IP	Internet Protocol
IT	Information Technology
LGC	Manufacturer of Coverage Solution
LTE	Long Term Evolution
Macro Network	WSP outdoor network
MDF	Medium Density Fiberboard
MHz	Mega Hertz – measure of frequency
Micro-Cell	A cell in a mobile phone network served by a low power cellular base station, covering a limited area
MIMO	Multi-In-Multi-Out
MNO	Mobile Network Operator
MOP	Method Of Procedure
MTBF	Mean Time Between Failures
Multi-Carrier	Coverage Solution term used to describe multiple service providers
Neutral Host	A distributed antenna system that is not specific to an individual wireless service provider but can serve multiple services
NMS	Network Management System
NOC	Network Operations Center

OET	Office of Engineering Technology - FCC
PBX	Private Branch Exchange
PC	Personal Computer
PCS	Personal Communications Service
PhD	Doctor of Philosophy
Pico-Cell	Term used to describe a small area in wireless network
POS	Point of Service
QOS	Quality Of Service
RCDD	Registered Communications Distribution Designers
RF	Radio Frequency
RFID	Radio Frequency Identification
RHU	Remote Hub Unit
RIU	Radio Interface Unit - A device that provides an interface to the radio equipment provided by the wireless service provider
ROI	Return on Investment
RSSI	Receive Signal Strength Indicator - A measurement of the received radio signal strength
RTLS	Real Time Location Systems
SC/APC	Subscription Channel/Angle Polished Connector. A standard optical fiber connector type with specific physical characteristic which is known for its audible click locking mechanism
SISO	Single-In-Single-Out
SMR	Specialized Mobile Radio
SNMP	Simple Network Management Protocol
T1	Trunked interoffice
TDMA	Time Division Multiple Access - wireless protocol
Telecom	Telecommunications
TMA	Tower Mounted Amplifier
Type N RF	Connector type
UMTS	Universal Mobile Telecommunications System
V	Volt
UPS	Uninterruptable Power Supply
VoIP	Voice Over Internet Protocol
W-CDMA	Wide Band - Code Division Multiple Access
WiFi	Wireless Fidelity
WiMAX	Worldwide Interoperability for Microwave Access
WiMedia	Industry Association
Wireless LAN or WLAN	Wireless Local Area Network - Linking computers in the home or office network (often to the internet) without wires
WSP	Wireless Service Provider