**TERMS**

| Terms | Definitions |
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| **AGL** | **Above Ground Level**; towers are measured from ground level to their tip height. |
| **AMPS** | **Advanced Mobile Phone System;** It is the cellular standard that was developed for use in North America. This type of system operates in the 800 MHz frequency band. |
| **AMSL** | **Above Mean Sea Level**; Usually refers to terrain height with respect to sea level which is 0 ft. |
| **Antennas** | are passive elements that transfer or convert energy from one form to another. The purpose of an antenna is to convert radio frequency electric current to electromagnetic waves, which are then radiated into space |
| **Area Availability** | A statistical measurement of service quality level over entire cell coverage area under a specific traffic loading. The percentage of the service area covered all the time. |
| **Azimuth** | is the direction or orientation based on either True North or Magnetic North (True North is used in our tools). |
| **Base Station** | A piece of equipment used for communicating with mobile units. Depending on the context, the term Base Station may refer to a cell or a sector within a cell. |
| **Beamwidth of an antenna** | is defined as the angle subtended between the two half- power (3 dB) points on either side of the main lobe of transmission. The half- power points are symmetrical around the radius containing the peak of the main lobe. |
| **CDMA** | **Code Division Multiple Access;** It is an alternative digital standard developed in the United States. |
| **Cell radius** | distance from the cell center to the effective cell coverage. It helps determine the number of cell sites required to initially cover an entire market. |
| **Center Frequency** | The nominal frequency of a carrier wave. |

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| **CF** | **Correction Factor**; A numerical value that is added to the propagation model to adjust it to reality. This is determined by drive testing and integrating the results to the model. It fine-tunes the tool for things such as trees, buildings and residential areas. |
| **Coordinates** | A pair of numbers that identifies a position relative to an axis. The Lat. and Long. are used to place the location on a map. |
| **dBi** | Is the ratio (in dB) of the antenna gain to the isotropic or perfect antenna. |
| **dBm** | Is the ratio (in dB) of power to one milliwatt. |
| **Diversity** | The method of combining two or more received signals to minimize the effects of path fading. |
| **Diversity Gain** | An advantage to receive the signal during fading on the antenna receiving the better signal at that time. |
| **Downlink** | Signal transmission from base station to mobile station, i.e. Forward Link. |
| **Downtilt** | When the main lobe or beam of an antenna is intentionally adjusted below the horizon. There are two types – electrical and mechanical. Electrical downtilt is tuning the elements inside the antenna to aim down. Mechanical downtilt is physically adjusting the entire antenna to aim down. |
| **EIRP** | **Effective Isotropic Radiated Power**; The transmitted power multiplied by the antenna gain relative to an isotropic (perfect) antenna. |
| **ERP** | **Effective Radiated Power**; Energy-wise, this is the power that comes out of an antenna. This dictates the cell coverage area. |
| **FAA** | **Federal Aviation Administration**; The organization responsible for the all rules in airspace. |
| **Fade Margin** | is the breathing space added to ensure signals are received at the required area availability. |
| **FCC** | **Federal Communications Commission**; Responsible for the rules and regulations of frequencies. |
| **Frequency** | The number of occurrences within a given time period (usually 1 second) |

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| **Ground Elevation (GE)** | The vertical distance from a datum, usually mean sea level, to a point or object on the earth's surface. |
| **Hand-off** | The process of transferring the mobile station that has a call in progress on a particular channel to another voice channel without interrupting the call. This normally happens between Base Stations. |
| **K Factor** | Ties in the relationship between the earth's curvature and the atmospheric conditions that can bend the electromagnetic wave or frequency being used. |
| **Latitude (Lat)** | A group of imaginary lines around the Earth parallel to the equator. The lines starts at 0 to 180 then back down with (-) numbers. They are split up in the N and S hemisphere. |
| **Longitude (Long)** | A group of imaginary lines on the surface of the earth passing through the north and south poles at right angles to the equator. The lines starts at 0 to 180 then back down with (-) numbers. They are split up in the E and W hemisphere. |
| **Morphology** | Characteristics and configuration and evolution of land areas |
| **MOU** | Minutes of Use, a measure of wireless traffic |
| **NAD 27, 83** | North American Datum 1927 and 1983 standards. NAD 27 is based on the survey the USGS did in 1927 and NAD 83 are the corrected surveys they did in 1983 (USGS 7.5" map coordinates are NAD 27 and the FAA requires NAD 83 coordinates). |
| **PCN/PCS** | Personal Communications Network / Personal Communications Services |
| **Receiver Sensitivity** | Is a measure of the receiver's ability to receive weak signals, usually expressed in dBm. |
| **RF** | **Radio Frequency;** The electromagnetic frequencies in the range extending from below 3 KHz to 300 GHz, which includes radio and television transmission. These frequencies are above audio signals and below the frequencies of visible light. |
| **RF Propagation** | is the transfer of radio-frequency energy through space by the broadcast of electromagnetic signals. |
| **RX** | Receive, as in Receive antennas |

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| **Signal Threshold** | The minimum intensity of a signal that can be detected and recognized |
| **Traffic** | The measurement of messages or voice calls transmitted on a communications system over a period of time. |
| **TX** | Transmit, as in Transmit power |
| **Uplink** | Signal transmission from mobile station to base station, i.e. Reverse Link. |
| **USGS** | United States Geological Survey – the people who produce maps of the U.S. |

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