Synopsis

In response to recent deployment trends in wireless networking, ISO/IEC has extended its definition of premises cabling to support Wireless Access Points. A Technical Report, ISO/IEC 24704, was published in March 2004. This cabling specification has been optimised to support a wide range of wireless technologies, including IEEE 802.11 Radio LANs, DECT and Bluetooth Personal Area Networks (PANs). The business case for extending conventional voice & data cabling to accommodate Wireless Access Points is financially persuasive, as the total number of outlets should not increase by more than 5%.

1. Additional Planning & Installation Procedures

ISO/IEC 24704 defines structure and dimensions for additional cabling but also recommends the use of radio frequency site surveys due to the complexity of predicting microwave propagation within buildings. Installation of additional cabling is recommended as a grid on or within ceilings.

A *honeycomb* wireless cell structure is assumed and the cabling grid spacing is recommended to be 12m due to the operating range of some radio technologies (IEEE 802.11 and 11b specify a typical indoor range of 30m). A minimum of one outlet is recommended per coverage area, with at least Class D (Cat 5e) performance. Coverage areas and the placement of outlets are illustrated in figure 1.

The use of MUTOs should be accommodated.

Remote power may be provided over copper cabling from a Telecoms Room or, alternatively, if mid-span powering is used, the power supply must be external to the permanent link. IEEE 802.3af remote powering is assumed.

If optical fibre is provided in place of copper, local mains power is also required.

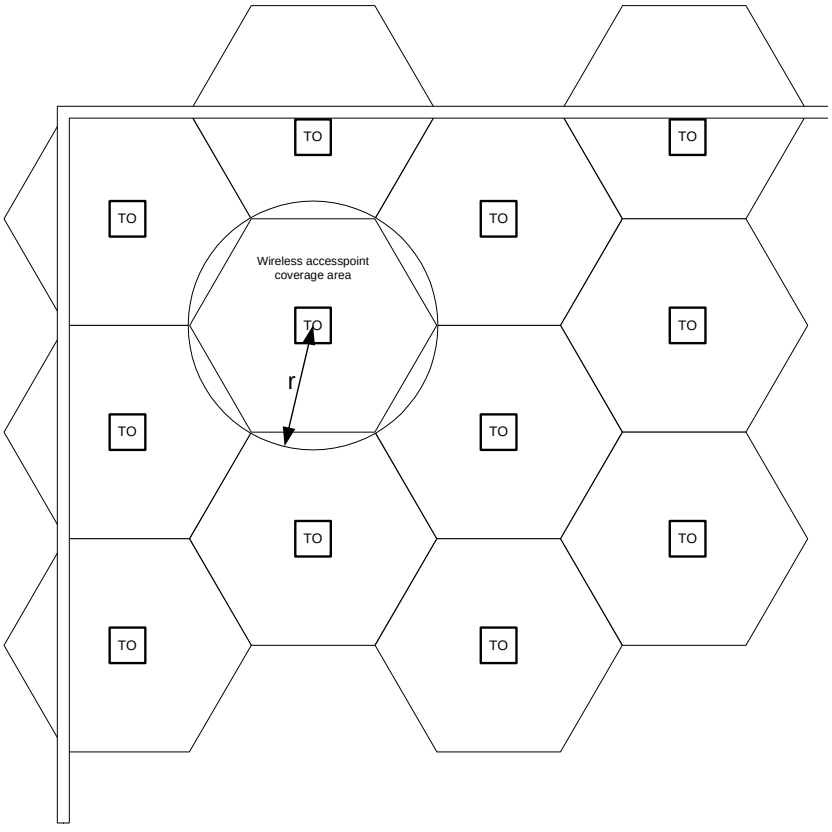

Figure 1: *Honeycomb* Grid Structure to Accommodate Wireless Access Points

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2. Opportunity for Installers

The principle of *floodwiring* is embraced by a high percentage of end user organisations, where conventional phone & data outlets are provided throughout the workspace with a density of between 2m x 2m to 3m x 3m. The business case for extending this principle to accommodate Wireless Access Points is financially persuasive, as an additional outlet density of 12m x 12m should increase the outlet count by no more than 5%.

White Paper

About Brand-Rex

Brand-Rex is a designer and manufacturer of copper and fibre based cabling systems, headquartered in Glenrothes, Scotland with facilities across Europe. Brand-Rex has two primary businesses: Connectivity and Speciality. Its Connectivity division designs and manufactures cabling systems (both copper and fibre) for data communications and is the No.2 player in Europe. The Speciality division exclusively produces cables that are used for control, communications, power and instrumentation within hostile environments.

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