

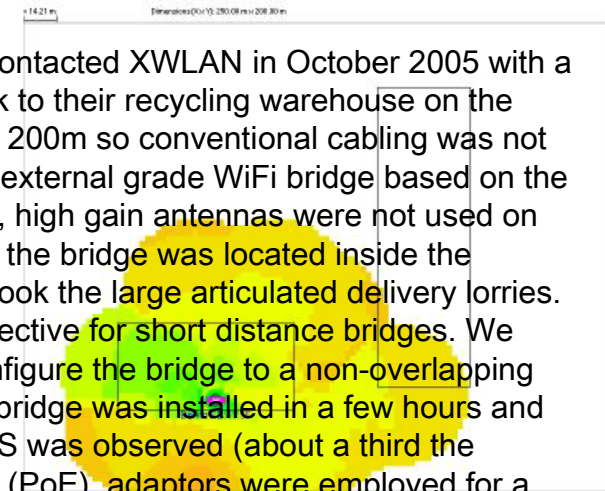


with **U.S. Robotics**

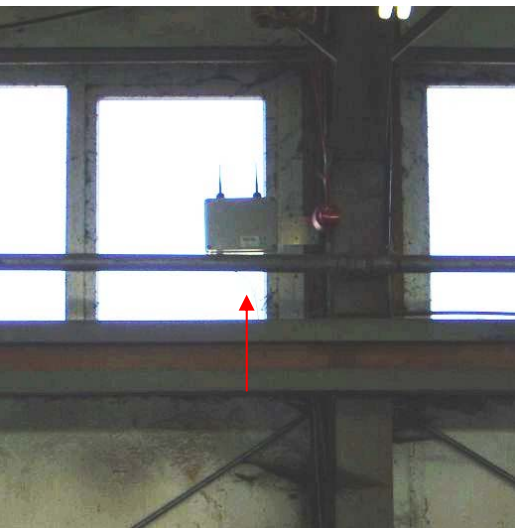


Proposed link path

Signal Distribution



XWLAN UAP1Wg and PoE IP56 rated weather proof housing and standard antenna

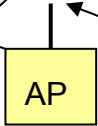
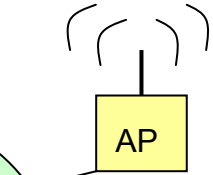
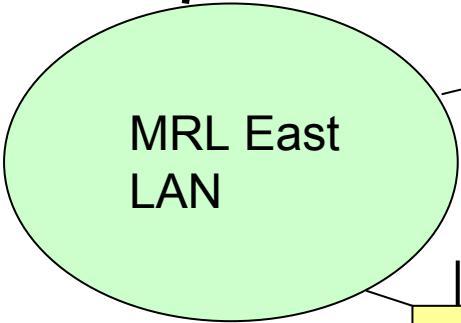
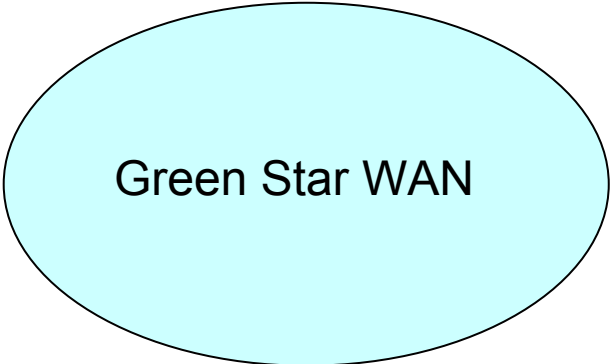


Materials Recovery Ltd, a recycling specialist, contacted XWLAN in October 2005 with a requirement to connect their main office network to their recycling warehouse on the same site. The total CAT5 cable run was nearly 200m so conventional cabling was not possible. XWLAN formulated a tried and tested external grade WiFi bridge based on the 5450 AP. As the LOS run was reasonably short, high gain antennas were not used on this occasion. Unusually in this case one end of the bridge was located inside the warehouse behind a high window so as to overlook the large articulated delivery lorries. Penetration through glass seems to be quite effective for short distance bridges. We carried out a pre installation survey so as to configure the bridge to a non-overlapping channel and verify any possible problems. The bridge was installed in a few hours and after testing an average throughput of 2.36 MB/S was observed (about a third the throughput of CAT5). USR power over Ethernet (PoE) adaptors were employed for a neat, single cable entry to the enclosure. Finally a signal to noise test was completed to view the bridge RF performance. Interestingly WiFi bridges do not appear on a conventional survey, nor can they be seen as available wireless networks. This is a feature of the security employed by bridge mode operation. In November 2006 MRL (now greenstar) requested an extension to the WLAN as seen on the following page.

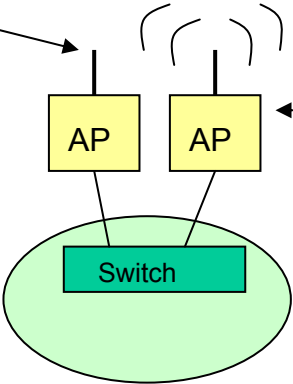




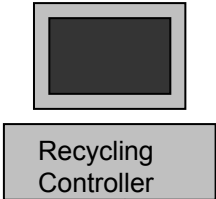
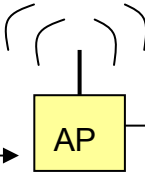
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Bridge Installed Oct 2005



WDS Bridge Installed Nov 2006





Materials Recovery Ltd, asked XWLAN to extend their WLAN to include connection of their new recycling machine. This extension was achieved using a pair of XWLAN UAP3, IP66 rated Access Points configured as a WDS encrypted bridge. The red arrows show the locations of the APs based on the new USR Professional Access Points.

The top right picture shows one of our engineers completing the connection inside the machinery controller.

IP56 and 66 rated APs were used as the environment inside the recycling warehouse is harsh and airborne material is a major problem.

A sustained data throughput of around 7MB/S was achieved and connectivity was good even behind several metres of compacted rubbish before the final placement of the APs.

As the XWLAN UAP3 acts as an Access Point as well as a WDS bridge additional equipment can be connected using APs configured as clients. This will require only one extra AP for each new connection up to 400M away with clear line of sight.

