

Radio-over-Fibre links for IEEE802.16-2004 WiMAX Base Stations: applications and field trial demonstration

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Abstract – This paper describes suitable architectures for the deployment of WIMAX networks employing Radio-over-Fibre (RoF) systems as a low-cost alternative to traditional distribution employing cabled or wireless backhaul architectures. Laboratory experiments demonstrating the feasibility of RoF technology to deliver WIMAX signals (based in IEEE 802.16d-2004) in the 3.5 GHz band are reported. EVM measurements have shown compliance with the limits defined in the corresponding standards. Finally, a field trial demonstration carried out in the frame of a European research project is presented.