Abstracts

An Internet controlled calibration system for TDMA smart antenna wireless base stations

J.H. Sinsky. "An Internet controlled calibration system for TDMA smart antenna wireless base stations." 2001 MTT-S International Microwave Symposium Digest 01.1 (2001 Vol. I [MWSYM]): 141-144 vol.1.

Smart antenna base stations are receiving considerable attention in the wireless marketplace due to their potential for increasing system capacity. These antenna arrays usually require accurate calibration in order to produce high quality steerable beams and direction of arrival measurements. The following work describes the design and measurement results of a new approach to array calibration consisting of a tower top Internet controllable high dynamic range data collection system combined with remote data processing. Measurements acquired during a sequence of time slots are used to obtain calibration accuracy of better than 1 degree for phase and better than 1.5% for amplitude. All data was taken on a smart antenna system prototype designed for advanced wireless access applications at our Crawford Hill Laboratory.

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