



TECHNOLOGY

Probing Method for Fast Handoff in WLAN

OVERVIEW

WLAN devices have been integrated into mobile PCs and other mobile devices. However, as user mobility increases, the small cell size as defined by standard 802.11 standard in WLANs can induce frequent handoffs, causing inevitable communication delays. Therefore, a method for minimizing the probing latencies caused by the increasing channel numbers so as to provide a seamless handoff in WLAN system is desirable.

Researchers at University of Maryland College Park have invented a technology that allows effective multimedia service and seamless handoff in view of terminal mobility between IP based heterogeneous networks by improved neighbor graphs which considers operational situation of the access node. The proposed technique is capable of reducing the number of channels to probe and the probe-wait time using a neighbor graph as a local topology in handoff procedure. The inventors have described a novel non-overlap graph for constructing the neighbor graph and illustrated the probing process with graph pruning algorithms. The results from simulations indicate that the invented probing method reduces the latencies of conventional full scanning and observed scanning algorithms by 83.9% and 42.1% respectively.

The probing method described minimizes the handoff delay and probing latency by adopting the novel neighbor-graph scheme so as to allow speed data communication service in wireless networks and seamless handoff.

For additional information please contact the Office of Technology Commercialization, University of Maryland. Phone: 301-405-2555.

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Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Patent(s) pending

LICENSE STATUS

Contact OTC for licensing information

CATEGORIES

- Microelectronics
- Information Technology

EXTERNAL RESOURCES

- [US Patent 7,400,604](#)

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