

IEEE P802.11  
Wireless Access Method and Physical Layer Specifications

**Title: Type dependent (Smart) DIFS.**

**Authors:**

Wim Diepstraten  
AT&T WCND  
Nieuwegein The Netherlands  
Tel: (31)-3402-97482  
Fax: (31)-3402-97555  
Email: Wim.Diepstraten@utrecht.ncr.com

**Abstract:**

This document intend to describe what the draft text changes are for the support of a type dependent DIFS specification.

**Background:**

A description of the reasons for a type dependent DIFS are given in the associated presentation material.

**Draft Text changes.**

Replace the following section by:

Section 5.2.4.3. DCF-IFS (DIFS)

The DCF priority level shall be used by the DCF to transmit asynchronous MPDUs. Stations that detected the medium busy at the initial access attempt shall defer until the medium has become free for a duration of DIFS before they will decrement their backoff delay.

In order to prevent that hidden stations will interfere with the Ack frame, there are two DIFS values specified. A DIFS\_S is to be used following an Ack frame, while a DIFS\_L value needs to be used in all other cases.

The MAC state machine shall include provisions to identify that the previous frame was an Ack. It does that by the interpretation of the MAC frame header for the cases where the frame was successfully received, and by determining the length of the medium busy duration monitoring the CCA indication from the Phy.

**MIB changes:**

Change section 7.3.4.2.28 aDIFS

and replace it with the specification for aDIFS\_S and aDIFS\_L.

aDIFS\_S description:

“This attribute indicates the length of the distributed interframe space following an Ack frame”.

aDIFS\_L description:

“This attribute indicates the length of the distributed interframe space following all frames except the Ack frame”.

State Machine changes: