IEEE 802.21  
Extension for supporting handovers with Downlink only technologies

Media Independent Sensing

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Abstract

This document presents a solution to the lack of support for sensing in the current specification which is needed to know if a channel is being used by another user.

# Background

Current IEEE 802.21b only supports a basic scanning functionality returning a list of channels, this is clearly insufficient since more information is required to know if a certain channel is being used by an i.e. an incumbent.

# Proposed Solution

In the following we present the set of primitives to be included in the .21b draft.

Modifiy Table F.4

|  |  |  |
| --- | --- | --- |
| LINK\_AC\_ATTR | BITMAP(8) | Link action attribute that can be exe- cuted along with a valid link action. Detail description of each attribute is in Table F.6.  Bitmap Values:  Bit 0: LINK\_SCAN  Bit 1: LINK\_RES\_RETAIN  Bit 2: DATA\_FWD\_REQ  **Bit 3: LINK\_SENSING**  **4–7: (Reserved)** |
| LINK\_ACTION\_RSP | SEQUENCE(  LINK\_ID,  LINK\_AC\_RESULT, CHOICE(NULL, LIST(LINK\_SCAN\_RSP),  LIST(LINK\_PROBE\_RSP)) | A set of link action returned results |
| LINK\_PROBE\_RSP | SEQUENCE(  DU\_CTR\_FREQ,  EIRP) | Frequency sensed and its power |