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| Project | **IEEE 802.21b** **<https://mentor.ieee.org/802.21>** |
| Title | **Suggested Remedies for 802.21b: New Network Types need to be defined** |
| DCN | **21-11-0080-00-bcst** |
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| Re: |  |
| Abstract | IEEE 802.21b extends IEEE 802.21 to handle DO technologies such as DVB, T-DMB and ATSC-M/H. This technologies are not defined as Network Types |
| Purpose | Proposes changes in the current draft |
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**Suggested Changes:**

**This contribution also updates table F.14 and tables derived from it with the latest version of the RADIUS NAS-Port Type mapping.**

**Change Table F.14 in the following way:**

|  |  |  |
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| **Network** | **Link type** | **Network subtype** |
| (*Reserved*) | 0 | N/A |
| Wireless - GSM | 1 | N/A |
| Wireless - GPRS | 2 | N/A |
| Wireless - EDGE | 3 | N/A |
| (*Reserved*) | 4-14 | N/A |
| Ethernet - IEEE 802.3 | 15 | Bit 0: 10 MbBit 1: 100 MbBit 2: 1000 MbBit 3ñ–63: (Reserved)The above bits represent the link speeds that Ethernet supports.The capability information of twisted pair Ethernet link can beobtained via auto-negotiation as defined in Clause 28 of IEEE Std802.3. |
| (*Reserved*) | 16-17 | N/A |
| Wireless - Other | 18 | Bit 0: DVBBit 1: T-DMBBit 2: ATSC-M/H |
| Wireless - IEEE 802.11 | 19 | Bit 0: 2.4 GHzBit 1: 5 GHzBit 2: 4.9 GHzBit 3: 3.65 GHzBit 4: 316 THzBit 5-63 (Reserved)The above bits represent the frequency band that IEEE 802.11link supports. The capability information and extended capabilitiesinformation of IEEE 802.11 link can further be representedas defined in 7.3.1.4 and 7.3.2.27, respectively, of IEEE Std802.11-2007. |
| (*Reserved*) | 20-21 | N/A |
| Wireless - CDMA2000 | 22 | N/A |
| Wireless - UMTS | 23 | Bit 0: Rel-99Bit 1: Rel-4Bit 2: Rel-5 (w/ HSDPA)Bit 3: Rel-6 (w/ HSUPA)Bit 4: Rel-7 (MIMO/OFDM)Bit 5: Rel-8Bit 6ñ–63: (Reserved) |
| Wireless - cdma2000-HRPD | 24 | Bit 0: Rev-0Bit 1: Rev-ABit 2: Rev-BBit 3: Rev-CBit 4ñ–63: (Reserved) |
| (*Reserved*) | 25-26 | N/A |
| Wireless - IEEE 802.16 | 27 | Bit 0: 2.5 GHzBit 1: 3.5 GHzBit 2-63: (Reserved)The above bits represent the frequency band that IEEE 802.16link supports. The system profiles of IEEE 802.16 link can furtherbe represented as defined in clause 12 (12.3 and 12.4) ofIEEE Std 802.16e-2005. |
| Wireless - IEEE 802.20 | 28 | N/A |
| Wireless - IEEE 802.22 | 29 | N/A |
| (*Reserved*) | 30-35 | N/A |
| Wireless-XGP | 36 | N/A |
| (*Reserved*) | 37-255 | N/A |

NOTE- The Link type values in Table F.14 are deliberately made consistent with RADIUS network access server (NAS)-Port-Type definitions as specified by Internet Assigned Numbers Authority (IANA).

NOTE: The DO technologies which do not have associated any RADIUS NAS-Port-Type are indicated through a subtype of Wireless-Other.

Change table F.15 as:

|  |  |  |
| --- | --- | --- |
| **Network** | **Link type** | **Network subtype** |
| NET\_TYPE\_INC | BITMAP(32) | A type to represent a set of link types.The value is a four octet bitmap:Bit 0: Wireless - GSMBit 1: Wireless - GPRSBit 2: Wireless - EDGEBit 3: IEEE 802.3 (Ethernet)Bit 4: Wireless - OtherBit 5: Wireless - IEEE 802.11Bit 6: Wireless - CDMA2000Bit 7: Wireless - UMTSBit 8: Wireless - cdma2000-HRPDBit 9: Wireless - IEEE 802.16Bit 10: Wireless - IEEE 802.20Bit 11: Wireless - IEEE 802.22Bit 12: Wireless-DVBBit 13: Wireless-DMBBit 14: Wireless-ATSC-M/HBit 15–31: (*Reserved AND shall be always set to 0*) |