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Title	Tables Summarizing the DL and UL PHY Structure parameters	
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Re:	Category: P802.16m/D1 comments for LB30 Area: Chapter 15.3.5 (DL PHY structure) and Chapter 15.3.8 (UL PHY Structure)	
Abstract	This contribution presents two tables summarizing the variables used to set the DL and UL PHY structure.	
Purpose	Adopt as remedy to Comments 906 and 1225 of the LB30 comment database 802.16-09/0047	
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Tables Summarizing the DL and UL PHY Structure parameters

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1. Introduction

A large number of variables are used to configure the DL and UL PHY structure. Sections 15.3.5 and 15.3.8 each need a table that lists all of the variables, specifies their units (e.g., units of PRUs, units of sub-bands, etc.), and where they are signaled (if applicable). Given the excessive complexity of this section, this type of table is essential. This contribution proposes a table for the downlink and a table for the uplink.

2. Table for DL PHY Section (15.3.5)

	Operation Procedure	Related Signaling Field (BW20/10/5MHz)	Channel for Signaling	Parameters Calculated from Signaled Fields	Definition	Units
Sector Common	Sub-band Partitioning	DSAC (5/4/3 bits)	SFH – SP2	K_{SB}	Number of Subbands	Subbands
				$L_{SB}=N_1*K_{SB}$	Number of PRUs assigned to Subbands	PRUs
				L_{MB}	Number of PRUs assigned to minibands	PRUs
	Frequency Partitioning	DFPC (4/3/3 bit)		FPCT	Number of Frequency Partitions	Frequency Partitions
				FPSi	Number of PRUs in FPi	PRUs
				K_{SB_FPi}	Number of SBs assigned to FPi	Subbands
				K_{MB_FPi}	Number of Minibands	Subbands (Groups)
		DFPSC (3/2/1 bit)				

					assigned to FPi	of N_1 PRUs)
				$L_{SB_FPi} = N_1 * K_{SB_FPi}$	Number of PRUs assigned to be Subbands in FPi	PRUs
				$L_{MB_FPi} = N_2 * K_{MB_FPi}$	Number of PRUs assigned to be Minibands in FPi	PRUs
Sector Specific	CRU / DRU Allocation	$DCAS_{SB,0}$ (5/4/3 bit) $DCAS_{MB,0}$ (5/4/3 bit) $DCAS_i$ (3/2/1) bit	SFH – SP1	$L_{SB-CRU,FPi}$	Number of Subband-based CRUs in FPi	CRUs
				$L_{MB-CRU,FPi}$	Number of Miniband-based CRUs in FPi	CRUs
				$L_{CRU_FPi} = L_{SB-CRU,FPi} + L_{MB-CRU,FPi}$	Number of CRUs in FPi	CRUs
				$L_{DRU_FPi} = FPS_i - L_{CRU_FPi}$	Number of DRUs in FPi	DRUs
	Tone Permutation	IDCell (10bit)	Obtained from SA-Preamble			

3. Table for UL PHY Section (15.3.8)

	Operation Procedure	Related Signaling Field (BW20/10/5MHz)	Channel for Signaling	Parameters Calculated from Signaled Fields	Definition	Units	
Sector Common	Sub-band Partitioning	USAC (5/4/3 bits)	SFH – SP2	K_{SB}	Number of Subbands	Subbands	
				$L_{SB}=N_1*K_{SB}$	Number of PRUs assigned to Subbands	PRUs	
				L_{MB}	Number of PRUs assigned to minibands	PRUs	
	Frequency Partitioning			UFPC (4/3/3 bit)	FPCT	Number of Frequency Partitions	Frequency Partitions
					FPSi	Number of PRUs in FPi	PRUs
				UFPSC (3/2/1 bit)	K_{SB_FPi}	Number of SBs assigned to FPi	Subbands
					K_{MB_FPi}	Number of Minibands assigned to FPi	Subbands (Groups of N_1 PRUs)
					$L_{SB_FPi} = N_1 * K_{SB_FPi}$	Number of PRUs assigned to be Subbands in FPi	PRUs
					$L_{MB_FPi} = N_2 * K_{MB_FPi}$	Number of PRUs assigned to be Minibands in FPi	PRUs
					CRU / DRU Allocation	UCAS _{SB,0} (5/4/3 bit)	SFH – SP1

					CRUs in F _{Pi}	
		UCAS _{MB,0} (5/4/3 bit)		$L_{MB-CRU,FPi}$	Number of Miniband-based CRUs in F _{Pi}	CRUs
		UCAS _i (3/2/1) bit		$L_{CRU,FPi} = L_{SB-CRU,FPi} + L_{MB-CRU,FPi}$	Number of CRUs in F _{Pi}	CRUs
				$L_{DRU,FPi} = FPSi - L_{CRU,FPi}$	Number of DRUs in F _{Pi}	DRUs
	Tile Permutation	IDCell (10bit)	Obtained from SA-Preamble			