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11		
12	UNITED STATES DI	STRICT COURT
13	CENTRAL DISTRICT	OF CALIFORNIA
14	THE CALIFORNIA INSTITUTE OF TECHNOLOGY,	
15	Plaintiff,	Case No. 2:13-cv-07245-MRP- JEM
16	,	JEN
17	VS.	JOINT CLAIM
18	HUGHES COMMUNICATIONS INC., HUGHES NETWORK SYSTEMS LLC, DISH NETWORK CORPORATION,	CONSTRUCTION AND PREHEARING STATEMENT
19	DISH NETWORK CORPORATION, DISH NETWORK LLC, and DISHNET SATELLITE BROADBAND LLC,	PURSUANT TO THE
20		COURT'S AMENDED SCHEDULING ORDER
21	Defendant.	(DKT. NO. 47)
22		The Hon. Mariana R. Pfaelzer
23		United States District Court Judge
24		Hearing Date: July 9, 2014
25		Time: 1:30 p.m.
26		Place: Courtroom 12
27		
.		



Plaintiff The California Institute of Technology ("Caltech") and Defendants
Hughes Communications Inc., Hughes Network Systems LLC, DISH Network
Corporation, DISH Network LLC, and dishNET Satellite Broadband LLC
(collectively, "Hughes") hereby submit this Joint Claim Construction and
Prehearing Statement pursuant to the Court's Amended Scheduling Order (Dkt. No.
47).

### I. AGREED CLAIM CONSTRUCTIONS

The parties have reached agreement on the construction of the following claim terms:

10	Claim Term(s)	Patent Claim(s)	Agreed Construction
11	"irregularly"	'710 patent, claim 15;	"a different number of
12		'032 patent, claim 1	times"
13	"interleaving" / "interleaver" / "scramble"	'710 patent, claims 1, 15, and 19	"changing the order of data elements" / "module
14			that changes the order of
15			data elements"
16	"sums of bits in subsets of the information bits" /	'781 patent, claims 6, 13,	"the result(s) of adding
17	"summing of bits in a	20, 21, 22	together two or more information bits from a
18	subset of the information		subset of information
19	bits" / "adding additional subsets of information		bits" / "adding together two or more information
20	bits"		bits from a subset of
21			information bits"
22	"wherein two or more memory locations of the	'833 patent, claims 1 and 8	"where two or more memory locations of the
23	first set of memory		first set of memory
24	locations are read by the permutation module		locations are read by the permutation module a
25	different times from one		different number of times
26	another"		from one another"
27	"permutation module"	'833 patent, claims 1, 2,	"a module that changes
28		3, 6 and 8	the order of data

elements"	L		
			elements"

If the parties reach agreement as to the constructions of additional terms at a later date, they will supplement the Joint Statement to reflect any such additional agreement.

### II. DISPUTED CLAIM CONSTRUCTIONS

The parties have identified the following terms as disputed, and respectfully request that they be construed by the Court:

9	Claim Term(s)	Patent Claim(s)	Caltech's Construction	Hughes's Construction
10	"repeat"	'710 patent,	"re-use in	"sequential
11		claims 1, 6, 11,	forming a code"	duplication"
12		15,16, and 19		
13	$x_j = x_{j-1} + \sum_{i=1}^{a} v_{(j-1)(a+i)}$	'032 claim 1	"The parity bit $X_j$	This term is
14	$x_j - x_{j-1} + \sum_{i=1}^{r} v_{(j-1)(a+i)}$		is the sum of (a) the parity bit $X_{i-1}$	indefinite under 35 U.S.C. §112,
15			and (b) the sum of	¶2. In the
16			a number, "a," of	alternative, plain
			randomly chosen irregular repeats	meaning.
17			of the message	
18			bits"	
19		'032 patent,	The Tanner	This term is
20	X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub>	claims 11and 18	Graph shows the	indefinite under
21			generation of parity bits	35 U.S.C. §112, ¶2.
22			(indicated by $x_i$ )	"
23	andown permutation		whose values are	At a minimum, however, this
24	NNDOM PE		each determined by the constraints	limitation
			imposed by the	requires "at least
25			check nodes	three information
26			(indicated by v <sub>i</sub> ) they are each	bits, where each of the three
27			connected	information bits
28			to. Each check	contributes to a

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1	Claim Term(s)	Patent Claim(s)	Caltech's	Hughes's	
2			Construction	Construction	
3			node is also	different number	
4			randomly connected to	of parity checks."	
5			message bits,		
6			where subsets of		
			message bits are		
7			re-used a different number of times		
8			in forming the		
9			connections to		
10			check nodes; one subset will be re-		
11			used two times,		
12			one subset will be		
13			re-used three times, and at least		
14			one additional		
			subset will be re-		
15			used more than three times. A		
16			check node		
17			imposes the		
18			constraint that the modulo-2 sum of		
19			all bits connected		
20			to it is "0."		
21					
22	"transmitting" /	'032 patent,	"sending over a	"sending over a	
23	"transmission"	claims 1, 8 and	channel"	physical channel"	
24		10			
	"codeword"	'781 patent,	"a discrete	"a discrete	
25		claims 1-4, 11,	encoded sequence	sequence of data	
26		13-16, 19-21	of data elements "	elements encoded for transmission"	
27				101 (141151111551011	
28					

Claim Term(s)	Patent Claim(s)	Caltech's Construction	Hughes's Construction
"combine"	'833 patent, claims 1, 2, 3, 8, 9, 10, and 13	"performing mod- 2 addition or exclusive-OR sum and/or writing the sum to the second set of memory locations based on a corresponding index"	This term is indefinite under 35 U.S.C. §112, ¶2. In the alternative, plain meaning.

The parties respectfully reserve the right to amend, correct, or supplement their respective claim construction positions in response to any change of position by another party or for other good cause.

## III. ANTICIPATED LENGTH OF CLAIM CONSTRUCTION HEARING

The parties expect that the claim construction hearing will take three hours.

## IV. PROPOSED WITNESSES TO CALL

The parties do not intend to offer any live witness testimony at the claim construction hearing.



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