

**The DSL Forum, a California non-profit corporation doing business as The Broadband Forum
("The Broadband Forum") Patent License Statement**

Patent Holder/Organization:

Legal Name QUALCOMM Incorporated

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The Broadband Forum Report(s) or Working Text(s)

Number Technical Report TR-126

Title Triple-play Services Quality of Experience (QoE) Requirements

Licensing declaration

The Patent Holder believes they hold granted patents and/or pending applications, whose use may be required to implement the above Broadband Forum report(s) or working text(s) and hereby declares, in accordance with the Broadband Forum policies

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- 3 The Patent Holder is unwilling to grant licenses according to the provisions of either 1 or 2 above. In this case, the following information must be provided as part of this declaration:
- patent registration/application number;
 - an indication of which portions of the Broadband Forum report(s) or working text(s) are affected.
 - a description of the patent claims covering the Broadband Forum report(s) or working text(s);

Signature

Organization QUALCOMM Incorporated

Name of authorized person Thomas R. Rouse

Title of authorized person VP, QTL Patent Counsel

Signature 

Place, Date San Diego, CA, USA, September 13, 2010

Patent Information (desired but not required)			
No.	Registration Number/ Country	Title/ Inventor	Status [granted/ pending]
1	6,307,487/United States of America	Information additive code generator and decoder for communication systems/Luby Michael G.	Granted
2	767140/Australia	Information additive code generator and decoder for communication systems/Luby Michael G.	Granted
3	6,373,406/United States of America	Information additive code generator and decoder for communication systems/Luby Michael G.	Granted
4	6,614,366/United States of America	Information additive code generator and decoder for communication systems/Luby Michael G.	Granted
5	7,057,534/United States of America	Information additive code generator and decoder for communication systems/Luby Michael G.	Granted
6	7,233,264/United States of America	Information additive code generator and decoder for communication systems/Luby Michael G.	Granted
7	20080034273/United States of America	Information additive code generator and decoder for communication systems/Luby Michael G.	Pending
8	20080180284/United States of America	Information additive code generator and decoder for communication systems/Luby Michael G.	Pending
9	2345237/Canada	Information additive code generator and decoder for communication systems/Luby Michael G.	Granted
10	EP1116335/Germany (Federal Republic of)	Lost packet recovery method for packet transmission protocols/Luby Michael G.	Granted
11	EP1241795/Germany (Federal Republic of)	Method and system for transmitting and receiving information using chain reaction codes/Luby Michael G.	Granted
12	EP1116335/European Patent	Lost packet recovery method for packet transmission protocols/Luby Michael G.	Granted
13	EP1241795/European Patent	Method and system for transmitting and receiving information using chain reaction codes/Luby Michael G.	Granted
14	EP2136473/European Patent	Method and system for transmitting and receiving information using chain reaction codes/Luby Michael G.	Pending
15	EP1116335/France	Lost packet recovery method for packet transmission protocols/Luby Michael G.	Granted
16	EP1241795/France	Method and system for transmitting and receiving information using chain reaction codes/Luby Michael G.	Granted
17	EP1116335/United Kingdom	Lost packet recovery method for packet transmission protocols/Luby Michael G.	Granted
18	EP1241795/United Kingdom	Method and system for transmitting and receiving information using chain reaction codes/Luby Michael G.	Granted
19	1038995/Hong Kong	Lost packet recovery method for packet transmission protocols/Luby Michael G.	Granted
20	140705/Israel	Lost packet recovery method for packet transmission protocols/Luby Michael G.	Granted
21	EP1116335/Italy	Lost packet recovery method for packet transmission protocols/Luby Michael G.	Granted
22	EP1241795/Italy	Method and system for transmitting and receiving information using chain reaction codes/Luby Michael G.	Granted
23	3976163/Japan	Lost packet recovery method for packet transmission protocols/Luby Michael G.	Granted
24	3809957/Japan	Lost packet recovery method for packet transmission protocols/Luby Michael G.	Granted
25	598662/Korea Republic of (KR)	Lost packet recovery method for packet transmission protocols/Luby Michael G.	Granted
26	79667/Singapore	Information additive code generator and decoder for communication systems/Luby Michael G.	Granted

Patent Information (desired but not required)			
No.	Registration Number/ Country	Title/ Inventor	Status [granted/ pending]
27	20070233891/United States of America	Multi-output packet server with independent streams/Luby Michael G. Ronen Vainish Lars Rasmussen David Kushi Serban Simu Adrian Perrig Roberto Attias Michael Walfish Diane Hernek John Byers	Pending
28	NI-194502/Taiwan	Multi-output packet server with independent streams/Luby Michael G. Ronen Vainish Lars Rasmussen David Kushi Serban Simu Adrian Perrig Roberto Attias Michael Walfish Diane Hernek John Byers	Granted
29	6,073,250/United States of America	Loss resilient decoding technique/Luby Michael G. Shokrollahi Amin Volker Stemann Michael Mitzenmacher Daniel Spielman	Granted
30	6,081,909/United States of America	Irregularly graphed encoding technique/Luby Michael G. Shokrollahi Amin Volker Stemann Michael Mitzenmacher Daniel Spielman	Granted
31	6,163,870/United States of America	Message encoding with irregular graphing/Luby Michael G. Michael Mitzenmacher Shokrollahi Amin Daniel Spielman Volker Stemann	Granted
32	7,068,729/United States of America	Multi-stage code generator and decoder for communication systems/Shokrollahi Amin Soren Lassen Luby Michael G.	Granted
33	7,720,174/United States of America	Multi-stage code generator and decoder for communication systems/Shokrollahi Amin Soren Lassen Luby Michael G.	Granted
34	7,711,068/United States of America	Multi-stage code generator and decoder for communication systems/Shokrollahi Amin Soren Lassen Luby Michael G.	Granted
35	12/781,192/United States of America	Multi-stage code generator and decoder for communication systems/Shokrollahi Amin Soren Lassen Luby Michael G.	Pending
36	1620760/China	Multi-stage code generator and decoder for communication systems/Shokrollahi Amin Soren Lassen Luby Michael G.	Pending

Patent Information (desired but not required)			
No.	Registration Number/ Country	Title/ Inventor	Status [granted/ pending]
37	02794439.6/European Patent	Multi-stage code generator and decoder for communication systems/Shokrollahi Amin Soren Lassen Luby Michael G.	Pending
38	1566/CHENP/2004/India	Multi-stage code generator and decoder for communication systems/Shokrollahi Amin Soren Lassen Luby Michael G.	Pending
39	4157041/Japan	Multi-stage code generator and decoder for communication systems/Shokrollahi Amin Soren Lassen Luby Michael G.	Granted
40	924295/Korea Republic of (KR)	Multi-stage code generator and decoder for communication systems/Shokrollahi Amin Soren Lassen Luby Michael G.	Granted
41	I280748/Taiwan	Multi-stage code generator and decoder for communication systems/Shokrollahi Amin Soren Lassen Luby Michael G.	Granted
42	6,856,263/United States of America	Systems and processes for decoding chain reaction codes through inactivation/Shokrollahi Amin Soren Lassen Richard Karp	Granted
43	7,030,785/United States of America	Systems and processes for decoding a chain reaction code through inactivation/Shokrollahi Amin Soren Lassen Richard Karp	Granted
44	7,265,688/United States of America	Systems and processes for decoding a chain reaction code through inactivation/Shokrollahi Amin Soren Lassen Richard Karp	Granted
45	7,633,413/United States of America	Systems and processes for decoding a chain reaction code through inactivation/Shokrollahi Amin Soren Lassen Richard Karp	Granted
46	ZL03813796.8/China	Apparatus and method of decoding of chain reaction codes through inactivation of recovered symbols/Shokrollahi Amin Soren Lassen Richard Karp	Granted
47	EP1506621/European Patent	Decoding of chain reaction codes through inactivation of recovered symbols/Shokrollahi Amin Soren Lassen Richard Karp	Pending
48	HK1082127/Hong Kong	Apparatus and method of decoding of chain reaction codes through inactivation of recovered symbols/Shokrollahi Amin Soren Lassen Richard Karp	Granted
49	3079/CHENP/2004/India	Decoding of chain reaction codes through inactivation of recovered symbols/Shokrollahi Amin Soren Lassen Richard Karp	Pending
50	4224022/Japan	Decoding of chain reaction codes through inactivation of recovered symbols/Shokrollahi Amin Soren Lassen Richard Karp	Granted
51	950186/Korea Republic of (KR)	Decoding of chain reaction codes through inactivation of recovered symbols/Shokrollahi Amin Soren Lassen Richard Karp	Granted

Patent Information (desired but not required)			
No.	Registration Number/ Country	Title/ Inventor	Status [granted/ pending]
52	6,909,383/United States of America	Systematic encoding and decoding of chain reaction codes/Shokrollahi Amin Luby Michael G.	Granted
53	7,394,407/United States of America	Systematic encoding and decoding of chain reaction codes/Shokrollahi Amin Luby Michael G.	Granted
54	7,532,132/United States of America	Systematic encoding and decoding of chain reaction codes/Shokrollahi Amin Luby Michael G.	Granted
55	20090189792/United States of America	Systematic encoding and decoding of chain reaction codes/Shokrollahi Amin Luby Michael G.	Pending
56	ZL200380104307.6/China	System and methods for systematic encoding and decoding of chain reaction codes/Shokrollahi Amin Luby Michael G.	Granted
57	EP1552617/European Patent	Systematic encoding and decoding of chain reaction codes/Shokrollahi Amin Luby Michael G.	Pending
58	1078999/Hong Kong	Systematic encoding and decoding of chain reaction codes/Shokrollahi Amin Luby Michael G.	Pending
59	220074/India	A decoder, a method of encoding source data into encoded data and a method of decoding encoded data/Shokrollahi Amin Luby Michael G.	Granted
60	4546246/Japan	Systematic encoding and decoding of chain reaction codes/Shokrollahi Amin Luby Michael G.	Granted
61	2010-108294/Japan	Systematic encoding and decoding of chain reaction codes/Shokrollahi Amin Luby Michael G.	Pending
62	10-2005-0059238/Korea Republic of (KR)	Systematic encoding and decoding of chain reaction codes/Shokrollahi Amin Luby Michael G.	Pending
63	7,418,651/United States of America	File download and streaming system/Luby Michael G. Shokrollahi Amin Watson Mark	Granted
64	20090031199/United States of America	File download and streaming system/Luby Michael G. Shokrollahi Amin Watson Mark	Pending
65	101019326/China	File download and streaming system/Luby Michael G. Shokrollahi Amin Watson Mark	Pending
66	EP1743431/European Patent	File download and streaming system/Luby Michael G. Shokrollahi Amin Watson Mark	Pending
67	EP2202888/European Patent	File download and streaming system/Luby Michael G. Shokrollahi Amin Watson Mark	Pending
68	1098594/Hong Kong	File download and streaming system/Luby Michael G. Shokrollahi Amin Watson Mark	Pending
69	2427/CHENP/2006/India	File download and streaming system/Luby Michael G. Shokrollahi Amin Watson Mark	Pending
70	2007-536834/Japan	File download and streaming system/Luby Michael G. Shokrollahi Amin Watson Mark	Pending
71	2007-0008520/Korea Republic of (KR)	File download and streaming system/Luby Michael G. Shokrollahi Amin Watson Mark	Pending

Patent Information (desired but not required)			
No.	Registration Number/ Country	Title/ Inventor	Status [granted/ pending]
72	7,721,184/United States of America	Method and apparatus for fast encoding of data symbols according to half-weight codes/Luby Michael G. Shokrollahi Amin	Granted
73	20090307565/United States of America	Method and apparatus for fast encoding of data symbols according to half-weight codes/Luby Michael G. Shokrollahi Amin	Pending
74	7,660,245/United States of America	FEC architecture for streaming services including symbol-based operations and packet tagging/Luby Michael G.	Granted
75	20100050057/United States of America	FEC architecture for streaming services including symbol based operations and packet tagging/Luby Michael G.	Pending
76	20070300127/United States of America	Code generator and decoder for communications systems operating using hybrid codes to allow for multiple efficient users of the communications systems/Watson Mark Luby Michael G.	Pending
77	6,320,520/United States of America	Information additive group code generator and decoder for communications systems/Luby Michael G.	Granted
78	781130/Australia	Group chain reaction encoder with variable number of associated input data for each output group code/Luby Michael G.	Granted
79	2359534/Canada	Information additive group code generator and decoder for communication systems/Luby Michael G.	Pending
80	EP1214793/Germany (Federal Republic of)	Group chain reaction encoder with variable number of associated input data for each output group code/Luby Michael G.	Granted
81	EP1214793/European Patent	Group chain reaction encoder with variable number of associated input data for each output group code/Luby Michael G.	Granted
82	EP1214793/France	Group chain reaction encoder with variable number of associated input data for each output group code/Luby Michael G.	Granted
83	EP1214793/United Kingdom	Group Chain reaction encoder with variable number of associated input data for each output group code/Luby Michael G.	Granted
84	144594/Israel	Information additive group code generator and decoder for communications systems/Luby Michael G.	Granted
85	2001-189665/Japan	Information additive group code generator and decoder for communications systems/Luby Michael G.	Pending
86	82441/Singapore	Group chain reaction encoder with variable number of associated input data for each output group code/Luby Michael G.	Granted
87	7,243,285/United States of America	Systems and methods for broadcasting information additive codes/Foisy Christian Joseph Vo Shokrollahi Amin Luby Michael G.	Granted