



Disclosure Statement and Licensing Declaration
This declaration does not represent an implied license grant

Please return to:

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Suite 1200
Washington, DC 20006
202-872-9160 – Office
202-872-9161 – Fax

Discloser:	
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URL (optional)	
Identification of ATSC Specification Document relevant to the Disclosure Statement:	
Number	ATSC A/322
Title	ATSC 3.0 Physical Layer

Licensing Declaration

If the Discloser is the holder of a patent and/or pending patent application that is the subject of an Essential Claim, *i.e.*, the use of which it believes would be required to implement the identified ATSC Specification Document, the Discloser hereby declares, in accordance with the Statement on ATSC Patent Policy (see ATSC website), that (check one box only).

a. The Discloser agrees to make a license to the Essential Claim available without compensation upon request to all applicants for the purpose of implementing the Specification Document, which license may be conditioned upon license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.

Mark here if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.

✓ b. The Discloser agrees to make a license to the Essential Claim available upon request under reasonable and nondiscriminatory terms and conditions to all applicants for the purpose of implementing the Specification Document, which conditions may include license reciprocity with respect to the same Specification Document. Negotiations are left to the parties concerned and are performed outside of ATSC.

Mark here if the Discloser's willingness to license is conditioned on reciprocity for the above ATSC Standard.

c. The Discloser will not make a license to the Essential Claim under reasonable and nondiscriminatory terms and conditions to applicants for the purpose of implementing the Specification Document.

Without Compensation: The phrase "without compensation" does not mean that the Discloser is waiving all of its rights with respect to each patent or patent application that is the subject matter of the Essential Claim. Rather, "without compensation" refers to the issue of monetary compensation; *i.e.*, that the Discloser will not seek any monetary compensation as part of the licensing arrangement (whether such compensation is called a royalty, a one-time licensing fee, etc.). However, while the Discloser in this situation is committing to not charging any monetary amount, the Discloser is still entitled to require that the implementer of the ATSC Specification Document sign a license agreement that contains other reasonable terms and conditions such as those relating to governing law, field of use, reciprocity, warranties, etc.

Reciprocity: As used herein, the word "reciprocity" means that the Discloser shall only be required to license any prospective licensee under the stated terms (without compensation or under reasonable and nondiscriminatory terms and conditions) if such prospective licensee will commit to license its patent(s) or patent application(s) forming the subject matter of an Essential Claim under similar (without compensation or under reasonable and nondiscriminatory) terms and conditions.

Disclosure of Patents

In accordance with Sections 3 and 4 of the ATSC Patent Policy, please identify each patent or patent application forming the subject matter of any Potential Claim of which any Representative of the Discloser who is active in an ATSC technology group or specialist group has actual personal knowledge. The Discloser, in good faith, believes that the Potential Claim may be relevant to the implementation of the Specification Document identified by this Disclosure Statement.

N o.	Patent / Application No. and Country	Patent / Application Holder	Status [granted/ pending]
1	2,864,634 CA	ETRI	pending
2	14186085.8 EP	ETRI	pending
3	10-2014-0120015 KR	ETRI	pending
4	MX/A/2014/012121 MX	ETRI	pending
5	14/496700 US	ETRI	pending
6	2,881,540 CA	ETRI	pending
7	10-2015-0017770 KR	ETRI	pending
8	MX/A/2015/001934 MX	ETRI	pending
9	14/620682 US	ETRI	pending
10	10-2015-0026040 KR	ETRI	pending
11	PCT/KR2015/001817 PCT	ETRI	pending
12	10-2016-0004462 KR	ETRI	pending
13	PCT/KR2016/001401 PCT	ETRI	pending
14	10-2016-0035023 KR	ETRI	pending
15	PCT/KR2016/003034 PCT	ETRI	pending
16	2,892,106 CA	ETRI	pending
17	10-2015-0012876 KR	ETRI	pending
18	14/717892 US	ETRI	pending
19	2,892,100 CA	ETRI	pending
20	10-2015-0012877 KR	ETRI	pending
21	14/718013 US	ETRI	pending

22	10-2015-0023861 KR	ETRI	pending
23	14/719598 US	ETRI	pending
24	2,892,101 CA	ETRI	pending
25	10-2015-0009138 KR	ETRI	pending
26	MX/A/2015/006531 MX	ETRI	pending
27	14/717203 US	ETRI	pending
28	10-2015-0023859 KR	ETRI	pending
29	14/719245 US	ETRI	pending
30	2,892,166 CA	ETRI	pending
31	10-2015-0009141 KR	ETRI	pending
32	MX/A/2015/006530 MX	ETRI	pending
33	14/717174 US	ETRI	pending
34	2,892,107 CA	ETRI	pending
35	10-2015-0012878 KR	ETRI	pending
36	14/718600 US	ETRI	pending
37	2,892,103 CA	ETRI	pending
38	10-2015-0009139 KR	ETRI	pending
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40	14/716820 US	ETRI	pending
41	10-2015-0023860 KR	ETRI	pending
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43	10-2015-0023862 KR	ETRI	pending
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52	10-2015-0021505 KR	ETRI	pending
53	14/626169 US	ETRI	pending
54	10-2015-0021507 KR	ETRI	pending
55	14/626272 US	ETRI	pending
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57	14/639646 US	ETRI	pending
58	10-2015-0023411 KR	ETRI	pending
59	14/664707 US	ETRI	pending
60	10-2015-0023414 KR	ETRI	pending
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62	2,880,125 CA	ETRI	pending
63	10-2015-0009381 KR	ETRI	pending
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65	10-2015-0021506 KR	ETRI	pending
66	14/626238 US	ETRI	pending
67	2,882,456 CA	ETRI	pending
68	10-2015-0012879 KR	ETRI	pending
69	14/625563 US	ETRI	pending
70	10-2015-0023410 KR	ETRI	pending
71	14/639625 US	ETRI	pending
72	10-2015-0023412 KR	ETRI	pending
73	14/664712 US	ETRI	pending
74	10-2015-0023415 KR	ETRI	pending
75	14/671523 US	ETRI	pending
76	2,880,079 CA	ETRI	pending
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78	14/606987 US	ETRI	pending
79	2,882,459 CA	ETRI	pending
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82	2,883,547 CA	ETRI	pending
83	10-2015-0009440 KR	ETRI	pending
84	MX/A/2015/002913 MX	ETRI	pending
85	14/636053 US	ETRI	pending
86	10-2015-0023413 KR	ETRI	pending
87	14/664718 US	ETRI	pending
88	10-2015-0023416 KR	ETRI	pending
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91	10-2015-0009441 KR	ETRI	pending
92	MX/A/2015/002226 MX	ETRI	pending
93	14/625550 US	ETRI	pending
94	10-2015-0023417 KR	ETRI	pending
95	14/671576 US	ETRI	pending
96	2,880,594 CA	ETRI	pending
97	10-2015-0002166 KR	ETRI	pending
98	MX/A/2015/001342 MX	ETRI	pending
99	14/606949 US	ETRI	pending
100	2,881,538 CA	ETRI	pending
101	10-2015-0017771 KR	ETRI	pending
102	MX/A/2015/001932 MX	ETRI	pending
103	14/618923 US	ETRI	pending
104	10-2015-0018675 KR	ETRI	pending
105	14/618972 US	ETRI	pending

106	2,881,523 CA	ETRI	pending
107	2015-0017772 KR	ETRI	pending
108	MX/A/2015/001936 MX	ETRI	pending
109	14/618952 US	ETRI	pending
110	2016-0020636 KR	ETRI	pending
111	PCT/KR2016/001756 PCT	ETRI	pending
112	2016-0020868 KR	ETRI	pending
113	PCT/KR2016/001757 PCT	ETRI	pending
114	10-2016-0020852 KR	ETRI	pending
115	PCT/KR2016/001875 PCT	ETRI	pending
116	10-2016-0020867 KR	ETRI	pending
117	PCT/KR2016/001758 PCT	ETRI	pending
118	10-2016-0020854 KR	ETRI	pending
119	PCT/KR2016/001878 PCT	ETRI	pending
120	10-2016-0020849 KR	ETRI	pending
121	PCT/KR2016/001879 PCT	ETRI	pending
122	10-2015-0026288 KR	ETRI	pending
123	PCT/KR2015/001832 PCT	ETRI	pending
124	10-2015-0093467 KR	ETRI	pending
125	PCT/KR2015/006836 PCT	ETRI	pending
126	10-2015-0118763 KR	ETRI	pending
127	PCT/KR2015/008846 PCT	ETRI	pending
128	2,864,640 CA	ETRI	pending
129	10-2014-0120008 KR	ETRI	pending
130	MX/A/2014/012112 PCT	ETRI	pending
131	14/496304 US	ETRI	pending
132	2,864,650 CA	ETRI	pending
133	10-2014-0120012 KR	ETRI	pending

134	MX/A/2014/012116 MX	ETRI	pending
135	14/496457 US	ETRI	pending
136	2,864,635 CA	ETRI	pending
137	10-2014-0120009 KR	ETRI	pending
138	MX/A/2014/012113 MX	ETRI	pending
139	14/496356 US	ETRI	pending
140	2,864,644 CA	ETRI	pending
141	10-2014-0120013 KR	ETRI	pending
142	MX/A/2014/012117 MX	ETRI	pending
143	14/496627 US	ETRI	pending
144	2,864,647 CA	ETRI	pending
145	10-2014-0120010 KR	ETRI	pending
146	MX/A/2014/012114 MX	ETRI	pending
147	14/496375 US	ETRI	pending
148	2,864,630 CA	ETRI	pending
149	10-2014-0120014 KR	ETRI	pending
150	MX/A/2014/012118 MX	ETRI	pending
151	14/496654 US	ETRI	pending
152	2,864,694 CA	ETRI	pending
153	10-2014-0120011 KR	ETRI	pending
154	MX/A/2014/012115 MX	ETRI	pending
155	14/496432 US	ETRI	pending
156	2,864,718 CA	ETRI	pending
157	10-2014-0117504 KR	ETRI	pending
158	MX/A/2014/012119 MX	ETRI	pending
159	14/495803 US	ETRI	pending
160	2,864,642 CA	ETRI	pending
161	10-2014-0116872 KR	ETRI	pending

162	MX/A/2014/012120 MX	ETRI	pending
163	14/495821 US	ETRI	pending
164	10-2016-0001735 KR	ETRI	pending
165	10-2016-0004460 KR	ETRI	pending
166	PCT/KR2016/000152 PCT	ETRI	pending
167	PCT/KR2016/002306 PCT	ETRI	pending
168	10-2016-0004461 PCT	ETRI	pending
169	PCT/KR2016/001399 PCT	ETRI	pending
170	10-2016-0025829 kr	ETRI	pending
171	2726022 CA	ETRI	pending
172	09755053.7 EP	ETRI	pending
173	10-2009-0046540 KR	ETRI	granted
174	12/994827 US	ETRI	granted
175	14/174622 US	ETRI	granted
176	201310383264.5 CN	ETRI	pending
177	102013109351.5 DE	ETRI	pending
178	10-2013-0055762 KR	ETRI	pending
179	13/906843 US	ETRI	granted
180	14/942392 US	ETRI	pending
181	10-2014-0102102 KR	ETRI	pending
182	14/908365 US	ETRI	pending
183	10-2013-0130740 KR	ETRI	pending
184	10-2016-0029468 KR	ETRI	pending
185	10-2016-0073779 KR	ETRI	pending
186	10-2016-0086110 KR	ETRI	pending
187	15/212109 US	ETRI	pending
188	10-2015-0172242 KR	ETRI	pending
189	10-2015-0185407 KR	ETRI	pending

190	10-2015-0189589 KR	ETRI	pending
191	10-2016-0000614 KR	ETRI	pending
192	10-2016-0001163 KR	ETRI	pending
193	10-2016-0005440 KR	ETRI	pending
194	10-2016-0029323 KR	ETRI	pending
195	10-2016-0030777 KR	ETRI	pending
196	10-2016-0031145 KR	ETRI	pending
197	10-2016-0031270 KR	ETRI	pending
198	10-2016-0035048 KR	ETRI	pending
199	10-2016-0041218 KR	ETRI	pending
200	10-2016-0042857 KR	ETRI	pending
201	10-2016-0045316 KR	ETRI	pending
202	10-2016-0051128 KR	ETRI	pending
203	10-2016-0052350 KR	ETRI	pending
204	10-2016-0117002 KR	ETRI	pending

Disclosure of Information

In accordance with Sections 3 and 4 of the ATSC Patent Policy, if the Discloser has made a licensing declaration under paragraph (c) above, please provide the following information;

- an identification of each patent or patent application that is the subject matter of the Essential Claim;
- an identification of specific section(s) or text of the Specification Document that are relevant to the Essential Claim; and
- an identification of each patent or patent application claim covering the Specification Document.

This information is informal in nature and does not constitute a legal opinion, but should be based on "good faith and belief" of the Discloser. Information provided in this section does not represent a formal "notice" that implementation of any resulting ATSC Standard or Recommended Practice would infringe any patent or patent application for the Essential Claim.

Completed By:	Electronics and Telecommunications Research Institute
Name of Participant	Jeeun Yi
Name of Representative	Yung Sik Kwon
Title of Representative	Director of Intellectual Property Management Section
Signature	<i>Yung-Sik Kwon</i>
Place, Date	Daejeon, October 5, 2016