

NEWS RELEASE

ULDAGE Announces New Call for Patents Essential to 4K/8K Broadcasting for IPTV and CATV

April 3, 2017

ULDAGE Inc.

ULDAGE Inc. ("ULDAGE"), a patent pool license managing company, announced today that it is going to make a call for patents essential to the standards of 4K/8K television broadcasting applicable to IPTV and CATV.

Currently, ULDAGE licenses a package of more than 600 essential patents which are related to the present digital television broadcasting standards through a patent pool system. Through this approach, ULDAGE has made a substantial contribution towards the promotion and growth of the digital television broadcasting system following the full transition of the broadcasting system from "analog broadcasting" to "digital broadcasting" by resolving the major patent issues surrounding sales and production of broadcasting receivers and broadcasting services. Further, on August 25, 2014, ULDAGE made a call for patents essential to the standards of 4K/8K broadcasting by satellites, and now has been preparing the new licensing program.

The purpose of this new call for patents is to promote the growth of 4K/8K broadcasting by creating a "one-stop licensing program" under fair and reasonable terms to license essential patents held by a number of patent holders regardless of the types of broadcasting media, and by expanding the licensing scope of 4K/8K broadcasting to IPTV and CATV, followed by the licensing related to satellite broadcasting.

Evaluation of whether a patent is essential for the standards will be conducted by the

Japan Intellectual Property Arbitration Center ("JIPAC"), which is a neutral third party institution with expertise in this field.

For any party that believes it possesses Japanese patents essential to the standards formulated by IPTV Forum Japan and standards formulated by Japan Cable Laboratories and wishes to apply for evaluation of essentiality, please apply for evaluation and submit such patents to JIPAC by June 30, 2017.

For more information regarding the application of essentiality evaluation, please visit JIPAC website (http://www.ip-adr.gr.jp/eng/) or ULDAGE website (http://www.uldage.com/en/).

About ULDAGE

ULDAGE was established in July 2006, aiming for the resolution of entanglement of patents through cooperation among parties concerned and for the creation of fair competition in this digital age. ULDAGE grants non-exclusive licenses to essential patents of multiple parties in a single package, and its business offers convenience to both patent holders and business users.

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President & CEO Yoshihide Nakamura

Stated Capital JPY 60 million

Shareholders JVC KENWOOD Corporation (14.29%)

Sharp Corporation (14.29%)

Sony Corporation (14.29%)

Toshiba Corporation (14.29%)

Panasonic Corporation (14.29%)

Hitachi Maxell, Ltd. (14.29%)

Mitsubishi Electric Corporation (14.29%)

IPTV (UHDTV) Applicable Standards

No.	Standard Name	Information
IPTVFJ STD-0001	Overview	
IPTVFJ STD-0002	VOD Specifications	
IPTVFJ STD-0003	Download Specification	English version is not available
IPTVFJ STD-0004	IP Broadcasting Specifications	
IPTVFJ STD-0005	Digital Terrestrial Broadcasting IP Retransmission Specifications	English version is not available
IPTVFJ STD-0006	CDN Scope Service Approach Specifications	
IPTVFJ STD-0007	Internet Scope Service Approach Specifications	English version is not available
IPTVFJ STD-0008	Specifications of IPTV Service Approach by Integration with Broadcasting	
IPTVFJ STD-0009	Digital Satellite Broadcasting IP Retransmission Specifications	English version is not available
IPTVFJ STD-0010	Integrated Broadcast-Broadband System Specification	
IPTVFJ STD-0011	HTML5 Browser Specification	
IPTVFJ STD-0012	Operator to Operator Communication Metadata Operational Guideline	English version is not available
IPTVFJ STD-0013	Hybridcast Specifications	English version is not available
IPTVFJ DOC-0002	Hybridcast Technical Specification Service Guideline	English version is not available

IPTVFJ Standards are available from the following website :

http://www.iptvforum.jp/download/

The IPTVFJ Standards refers to the Specifications of the Networked Digital Television Study Group.

This Specifications are available from the following website :

http://nw-dtv.jp/documents/index.html

CATV (UHDTV) Applicable Standards

Standards No.	Standard Name (English translation)	Information
Jlabs SPEC-017	Digital Television Broadcasting Operational Guideline for Advanced Re-Multiplex Transmission (Access Program)	
Jlabs SPEC-018	Digital Television Broadcasting Operational Guideline for Advanced Re-Multiplex Transmission (i-HITS)	
Jlabs SPEC-019	Digital Television Broadcasting Operational Guideline for Advanced Trans-Modulation (JC-HITS)	
Jlabs SPEC-028	Operational Guideline for IP Broadcasting (Access Program)	
Jlabs SPEC-030	Operational Guideline for IP-VOD Service	