MPEG-2 Patent Portfolio License Briefing*

*This presentation is for information purposes only. Actual license agreements will provide the only definitive and reliable statement of license terms.
Coverage

- Each patent in the MPEG-2 Patent Portfolio License is essential for implementing a portion of the MPEG-2 Video and Systems specification
  - Patents covering specific implementations are not essential and are not in the Portfolio
    - Some examples of specific implementations are:
      - Butterfly DCT circuits, telescopic motion vector search, smart encoding techniques, such as using the output of the motion compensation or motion estimation to control the quantizer, intra-slice refresh, etc.
Coverage

The Owners of the MPEG-2 Patents in the Portfolio

- Alcatel Lucent
- ARRIS Technology, Inc. (formerly General Instrument Corporation)
- British Telecommunications plc
- Canon Inc.
- CIF Licensing, LLC
- Cisco Technology, Inc.
- Columbia University
- Fujitsu Limited
- GE Technology Development, Inc.
- General Video, LLC
- Hewlett Packard Enterprise Company
- Hitachi, Ltd.
- JVCKENWOOD Corporation
- KDDI Corporation
- Koninklijke Philips N.V.
- LG Electronics Inc.
- Mitsubishi Electric Corporation
- Multimedia Patent Trust
- Nippon Telegraph and Telephone Corporation (NTT)
- Orange SA
- Panasonic Corporation
- Robert Bosch GmbH
- Samsung Electronics Co., Ltd.
- SANYO Electric Co., Ltd.
- Sharp Corporation
- Sony Corporation
- Thomson Licensing
- Toshiba Corporation
Coverage

- Licensors include all of their MPEG-2 Essential Patents worldwide*
- Attachment 1 to the MPEG-2 Patent Portfolio License is updated regularly*

*Under the MPEG-2 Patent Portfolio License, royalties are payable for products manufactured or sold in countries with an active MPEG-2 Patent Portfolio Patent at the time of manufacture or sale. Please note that the last US patent expired February 13, 2018, and patents are presently active in Malaysia.
Coverage

• Key technologies in the MPEG-2 Standard covered by Patents in the Portfolio:
  - Spatial Encoding
  - Motion Compensation
  - Picture Sequence
  - Bit Rate Control
  - Systems

• See [www.mpegla.com](http://www.mpegla.com) (Current Pools, MPEG-2, Essentiality) for a cross-reference chart showing illustrative essential claims
Product Categories

- MPEG-2 Decoders
  - e.g., set-top boxes, DVD players, TVs, personal computers, game machines
- MPEG-2 Encoders
  - e.g., digital video recording (DVR) devices, cameras
- Consumer Products
  - Devices including both encode and decode functionality intended for sale to consumer market, e.g., DVD recorders, cameras
- Packaged Medium
  - e.g., DVD Video Discs
MPEG-2 License Terms
Summary\(^1\)

- MPEG-2 Decoders and Encoders - $2.50 per unit from Jan. 1, 2002 ($4.00 per unit before Jan. 1, 2002), but $2.00 from later of January 1, 2010 or execution of license through December 31, 2015
- Consumer Products - $2.50 from Jan. 1, 2002 ($6.00 per unit before Jan. 1, 2002), but $2.00 from later of January 1, 2010 or execution of license through December 31, 2015
- From January 1, 2016 through December 31, 2017, royalty rates for MPEG-2 Decoders, MPEG-2 Encoders and MPEG-2 Consumer Products are $0.50 per unit with right of voluntary termination on 30-days written notice, but Licensees may elect a royalty of $0.35 per unit with right of voluntary termination on or after January 1, 2018
- From January 1, 2018 forward, royalty rates for MPEG-2 Decoders, MPEG-2 Encoders and MPEG-2 Consumer Products are $0.35 per unit with right of voluntary termination on 30-days written notice

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MPEG-2 License Terms Summary

- MPEG-2 Packaged Medium
  - Effective September 1, 2005, a simplified option was made available under which Licensees pay applicable MPEG-2 Video Event* rate ($0.016 from later of January 1, 2010 or execution of license through December 31, 2015) for each MPEG-2 video disc regardless of its specific content or playing time (except where the playing time is 12 minutes or less in which case the royalty is $0.01)
  - From January 1, 2016 forward, producers of MPEG-2 Packaged Medium in full compliance with the MPEG-2 Patent Portfolio License through 2015 will be deemed to have paid-up coverage without additional royalty after December 31, 2015 if the Enterprise with which the producer is affiliated continues in full compliance with the MPEG-2 License

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2 MPEG-2 video information with normal playing time up to 133 minutes. For information on MPEG-2 Packaged Medium rates over course of the MPEG-2 licensing program, please consult the MPEG-2 License.