



From Paper to Product The Last Mile

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MPEG 20th Year Anniversary Commemoration

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Overview

- **Numbers and Names**
- **The Last Mile**
- **MPEG LA® Licensing Model**
 - **What Problem Does It Solve?**
 - **How Does It Solve the Problem?**
 - **What Works and Why?**
- **Bequest to the Future**



Numbers and Names

- **What hath MPEG wrought?**

Numbers and Names

- **An Economic “Big Bang” By Any Measure**

Numbers and Names

- **~ 3.5 Billion MPEG-2 Devices**
 - **Set-top boxes (cable, satellite, IPTV)**
 - **Integrated TV sets**
 - **DVD players and recorders**
 - **PCs with MPEG-2**
 - **Game machines**
 - **Cameras**
 - **Other**

Numbers and Names

- **More than 1 million people working 40 hrs/week, 52 wks/year for 15 yrs (1994-2008)**

Numbers and Names

- **~ 40 Billion MPEG-2 Video (DVD) Discs**

Numbers and Names

- **> \$2.5 Trillion in MPEG-2 Product Sales**

Numbers and Names

- **In 2008 each of the world's ~ 6.7 billion people will spend an average of \$66.46 on MPEG-2 product**

Numbers and Names

- **We honor the MPEG parents**

Numbers and Names

- **We also recall those who took it from paper to product**

The Last Mile

- **Started with MPEG-2 digital video compression standard**
- **Single biggest challenge to MPEG-2 adoption was access to essential intellectual property rights (IPR)**
- **MPEG-2 IPR owned by many parties created potential for confusion, conflict and cost if Standard could be used at all given the patent “bottleneck”**
- **MPEG LA provided an alternative as a solution**
- **MPEG-2 became the most successful standard in consumer electronics history, and the *MPEG LA*[®] *Licensing Model* has become the template for others**



The Last Mile

- **MPEG-2 licensing began July 1997 after DOJ Business Review (EC Comfort letter Dec 1998)**
 - **Began with 8 Licensors, grew to 25**
 - **Began with 25 patent families, now 159 (more than 850 patents in 57 countries)**
 - **During this dramatic growth in value, MPEG-2 royalty rates have been reduced four times**
 - **1400+ Licensees and affiliates accounting for most MPEG-2 products in the current world market**



The Last Mile

Owners of MPEG-2 Patents

- Alcatel Lucent
- British Telecommunications plc
- Canon Inc.
- CIF Licensing, LLC
- Cisco Scientific Atlanta
- Columbia University
- France Télécom R&D**
- Fujitsu
- GE Technology Development, Inc.
- General Instrument Corp.*
- Hitachi, Ltd.
- KDDI Corporation
- LG Electronics Inc.
- Mitsubishi
- Nippon Telegraph and Telephone Corporation (NTT)
- Panasonic
- Philips
- Robert Bosch GmbH***
- Samsung Electronics Co., Ltd.
- SANYO Electric Co., Ltd.
- Sharp Corporation
- Sony
- Thomson Licensing
- Toshiba Corporation
- Victor Company of Japan, Limited (JVC)

*Up to and through date of last patent expiration (October 26, 2006)

**Up to and through date of last patent expiration (May 31, 2007)

***Up to and through date of last patent expiration (December 11, 2007)



The Last Mile

- **Obstacles overcome along the way**
 - **Investors**
 - **Licensors**
 - **Competition law compliance (DOJ, EC, JFTC)**
 - **Payment by Licensor Licensees**
 - **Signing/payment by non-Licensor Licensees**
 - **Patent enforcement actions**

MPEG LA® Licensing Model

What Problem Does It Solve?

- **IPR Thickets (interdependence of complementary patents owned by multiple patent owners)**
 - Drive need for multiple transactions
 - Impede technology adoption, interoperability and use
 - Restrict freedom of movement
 - Increase potential for conflict
 - Create threat of holdout
 - Bilateral licenses may be inefficient for many



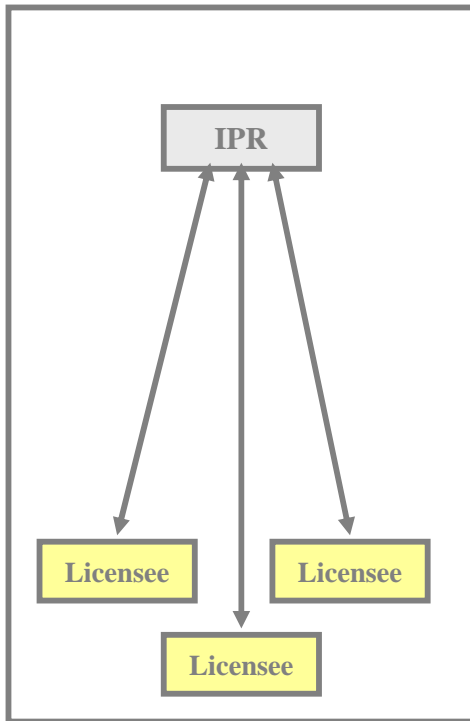
How Does It Solve the Problem?

- **The *MPEG LA*® *Licensing Model* offers a convenient alternative to assist IPR users with their technology choices**

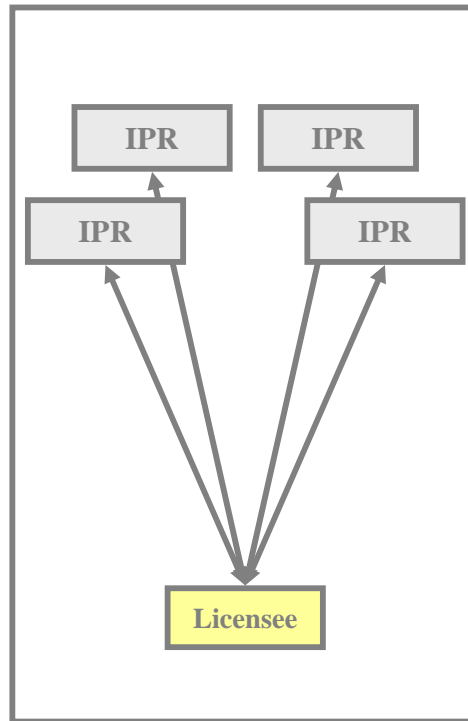


How Does It Solve the Problem?

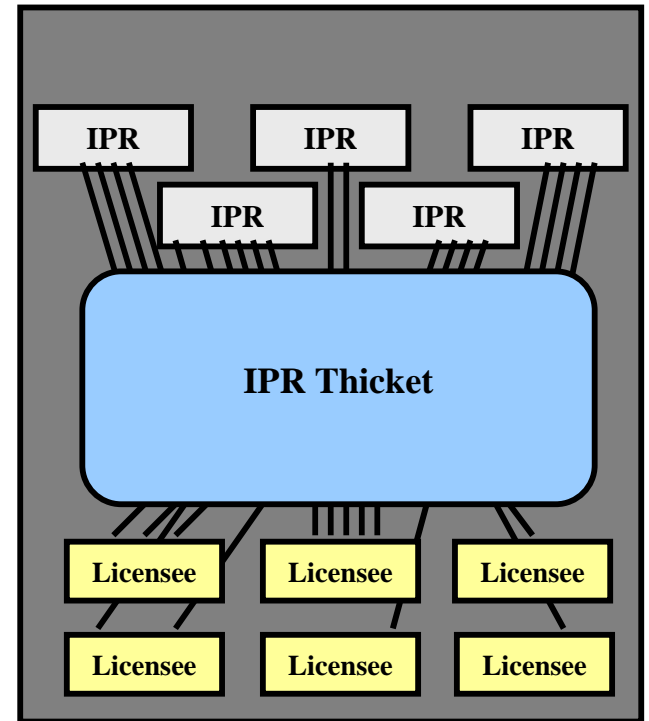
“One-to-Many”



“Many-to-One”

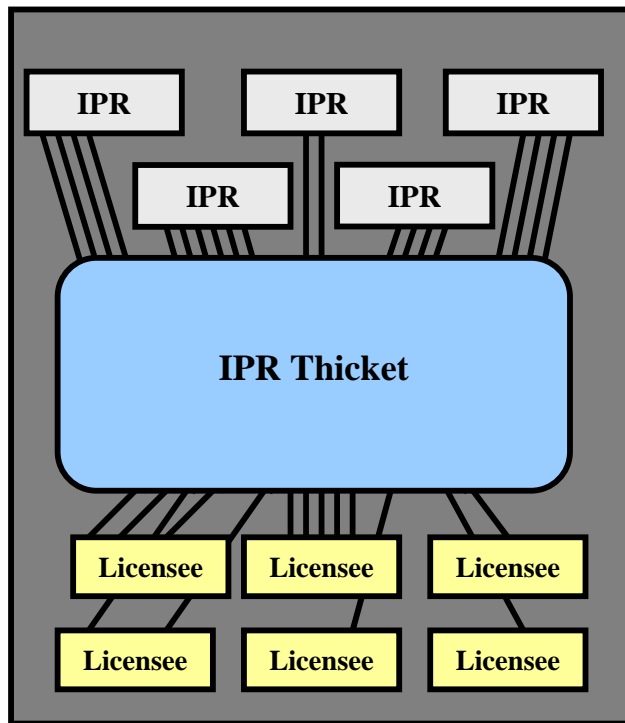


MPEG LA® “Many-to-Many” Licensing Model



How Does It Solve the Problem?

MPEG LA® “Many-to-Many” Licensing Model



The *MPEG LA® Licensing Model* enables *fair, reasonable, nondiscriminatory* access to essential IPR owned by multiple IPR owners in a single transaction as an alternative to separate licenses

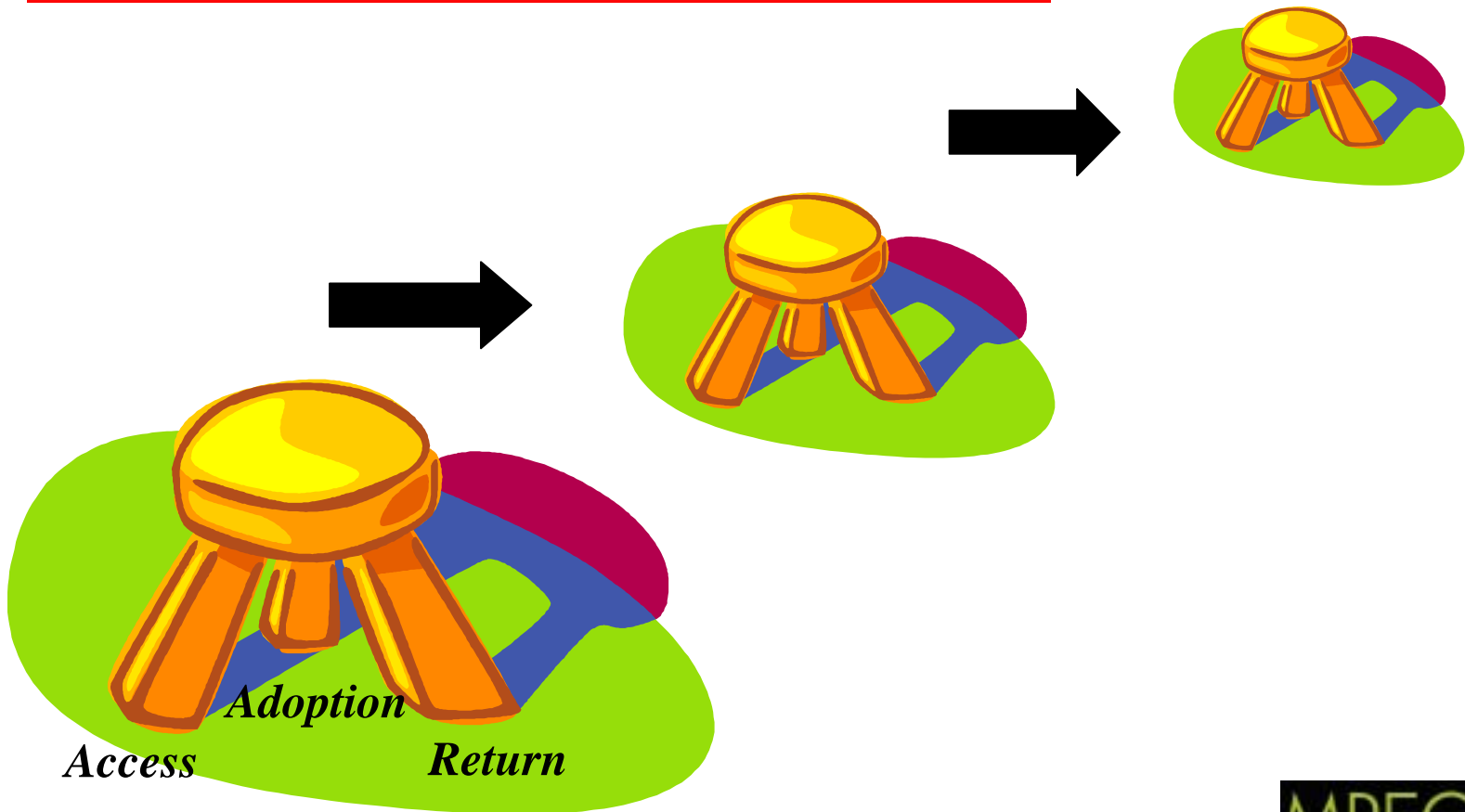
MPEG LA is granted a nonexclusive sublicense from essential IPR owners, collects and distributes royalties for the benefit of the essential IPR owners, and is paid an administrative fee from royalties collected



How Does It Solve the Problem?

- **The MPEG LA® Licensing Model balances reasonable access with reasonable return**

How Does It Solve the Problem?



How Does It Solve the Problem?

- **For IPR users, the *MPEG LA*® *Licensing Model* means**
 - **Convenience**
 - **Fair, reasonable, nondiscriminatory access**
 - **Opportunity for level playing field**
 - **Competition**



How Does It Solve the Problem?

- **For IPR owners, the *MPEG LA*® *Licensing Model* means**
 - **Opportunity for market adoption**
 - **Monetization and return on investment**
 - **Future innovation**



What Works and Why?

- **Standard or other defined platform/reference model by which “essentiality” may be determined**

What Works and Why?

- *Ex post, not ex ante*
 - **MPEG success is result of uncompromising quest for quality**
 - **FRAND**
 - **Firewall from licensing terms**
 - **Take the market as it is**

What Works and Why?

- **Fair, reasonable, nondiscriminatory access to essential patents**
 - **Objective: To include as much essential IPR as possible for the convenience of the market**
 - **Purpose: To make technology available to everyone**

What Works and Why?

- **Independent patent evaluation process**

What Works and Why?

- **Nonexclusive**
 - **License of convenience**
 - **Bilateral licensing options are always available to both Licensors and Licensees**

What Works and Why?

- **Freedom of Licensors and Licensees to develop competing products and standards**

What Works and Why?

- **Licensee Protections**
 - **Licensors and affiliates include all essential patents**
 - **Licensors are Licensees**
 - **All Licensees (Licensor and non-Licensor) pay the same royalty rates for the same products**
 - **Most Favorable Royalty Rates**
 - **Licensee data protected as confidential**
 - **Clear license grant**
 - **Grant-back similar in scope to license grant**
 - **Clear, up-to-date list of licensed patents**



What Works and Why?

- **Licensor Protections**
 - **Licensors share in reasonable allocation of royalties commensurate with their contributions to the License**
 - **Independent patent evaluation process and openness of license to as many essential patents as possible assures fairness, value and competition law compliance**

What Works and Why?

- **Independence**
 - **MPEG LA is not Licensor, Licensee or affiliate of any, and is not related to any standards agency**
 - **Fair, impartial administration**
 - **Each licensing program separately administered**



What Works and Why?

- **Trust**

- **Proven track record, established brand**
- **Consensus-building and market-making expertise**
- **Market knowledge**
- **Sales techniques/reputation - licenses offered as a service**
- **Focus on building business value for customers – both Licensors and Licensees - under reasonable terms fairly and consistently applied**
- **Attention to detail, legal compliance, financial reliability, transparency, customer service**
- **Secure website reporting and management**
- **Transaction fulfillment SAS 70-reviewed**
- **International tax mitigation and reconciliation**
- **Financial health**



What Works and Why?

- **Legal Tenability**

What Works and Why?

- **Emphasis on marketability**
 - **Open to new business models**
 - **Value given for value received**
 - **Need for both buyers and sellers**
 - **Both Licensees and Licensors are customers**
 - **Responsive to the marketplace**

What Works and Why?

- **Attributes suggested by 12 years of experience**
 - **Alternative licenses with potential for high percentage compliance**
 - **Patent thickets favoring pool over bilateral licensing solutions where freedom of movement and avoidance of conflict are desirable for technology implementers**
 - **Technology of value to mass market**
 - **Many Licensors**
 - **Many Licensees**
 - **Balance reasonable access with reasonable return to encourage both Licensor participation and Licensee compliance**
 - **Identifiable royalty products**
 - **Simple, nondiscriminatory license terms**
 - **Priced to sell across mass market**



Bequest to the Future

- **Wherever an independently administered joint patent license would provide a convenient marketplace alternative (see www.mpegla.com)...**

Bequest to the Future

The Model Becomes the Template

May 15, 2008 Data
 (See also www.mpegla.com)

MPEG-2 <i>Program started in 1997</i>	<ul style="list-style-type: none"> ▪ 25 patent holders ▪ 887 patents in 57 countries ▪ 1502 licensees
ATSC <i>Program began end of September 2007</i>	<ul style="list-style-type: none"> ▪ 7 patent holders ▪ 93 patents ▪ 65 licensees
AVC/H.264 <i>a/k/a MPEG-4 Part 10 Program started in 2005</i>	<ul style="list-style-type: none"> ▪ 23 patent holders ▪ 460 patents ▪ 466 licensees
VC-1 <i>Program began mid- March 2007</i>	<ul style="list-style-type: none"> ▪ 17 patent holders ▪ 448 patents ▪ 64 licensees
MPEG-4 Visual - Part 2 <i>Program started in 2004</i>	<ul style="list-style-type: none"> ▪ 28 patent holders ▪ 787 patents ▪ 681 licensees
MPEG-2 Systems <i>Program began end of April 2006</i>	<ul style="list-style-type: none"> ▪ 8 patent holders ▪ 179 patents ▪ 51 licensees
IEEE 1394 <i>Program started in 1999</i>	<ul style="list-style-type: none"> ▪ 10 patent holders ▪ 256 patents ▪ 389 licensees



Bequest to the Future In Development

- **New licenses**
- **New innovative models fit to different devices**
- **Applications in other industries**

Bequest to the Future Fueling Future Innovation

