

„Wettbewerbsrecht der digitalen Wirtschaft“

Thema: Standardessentielle Patente in der Lieferkette aus der Sicht eines Automobilherstellers

15.07.2021 Volkswagen AG, K-ILI Uwe Wiesner

Beitrag zum Webinar am Lehrstuhl für Bürgerliches Recht, Kartell- und
Regulierungsrecht, Recht der digitalen Wirtschaft,
Institut für Energiewirtschaftsrecht an der Universität zu Köln

Confidentiality Class: PUBLIC

Thesen:

- 1. Im Internet of Things wird das Automobil zum komplexesten „Thing“.**
- 2. Aufgrund der Komplexität der unterschiedlichen Komponenten kann eine Patentlizenzierung in der Automobil-Industrie nur bei konsequenter Lizenzierung durch Zulieferer erfolgen.**
- 3. Wegen der hohen Komplexität im Produkt und in den Lieferbeziehungen sind im Automobilsektor effektive, effiziente und vorhersehbare Lösungen für die Lizenzierung standardessentieller Patente nur durch Pools auf der Anbieter- **und** Nachfrageseite realisierbar.**

Wegen der internationalen Relevanz des Themas wird die weitere Präsentation auf Basis englischsprachiger Unterlagen fortgesetzt.

Very complex products

New business models

ICT (Information and Communications Technology) becomes an integral part of automotive products and components

Global markets and multi-national regulation

Complex supply chains with many „Black Boxes“

Needs for many standardized technologies lead to extended use of standard-essential patents

Challenges in Automotive Business

VOLKSWAGEN
AKTIENGESELLSCHAFT





Top WIPO Patent Applicants 2020

1	HUAWEI TECHNOLOGIES CO., LTD.	China	5,464
2	SAMSUNG ELECTRONICS CO., LTD.	Rep. of Korea	3,093
3	MITSUBISHI ELECTRIC CORPORATION	Japan	2,810
4	LG ELECTRONICS INC.	Rep. of Korea	2,759
5	QUALCOMM INCORPORATED	U.S.	2,173
6	TELEFON AB LM ERICSSON (PUBL)	Sweden	1,989
7	BOE TECHNOLOGY GROUP CO.,LTD	China	1,892
8	GUANG DONG OPPO MOBILE TEL. LTD	China	1,801
9	SONY CORPORATION	Japan	1,793
10	PANASONIC IP MGT CO., LTD.	Japan	1,611
11	HEWLETT-PACKARD DEV. COMP., L. P.	U.S.	1,595
12	MICROSOFT TECH. LICENSING, LLC	U.S.	1,529
13	ROBERT BOSCH CORPORATION	Germany	1,375
14	LG CHEM, LTD.	Rep. of Korea	1,374
15	NIPPON TELEGRAPH AND TEL. CORP.	Japan	1,372
16	ZTE CORPORATION	China	1,316
17	PING AN TECH. (SHENZHEN) CO., LTD.	China	1,304
18	SIEMENS AKTIENGESELLSCHAFT	Germany	1,202
19	FUJIFILM CORPORATION	Japan	1,128
20	NEC CORPORATION	Japan	1,121

Challenges in Automotive Business



Standardization Landscape

Speech

- Voice Recognition
- SMS dictate
- Text to speech function

HMI

- Pin Yin
- Java VM9
- IME
- HWR...

Navigation

- TPEG
- Navigation
- ...

E-Mobility

- Inductive
- Charging
- ...

Charging Communication

- Billing

Online Services

- Voice Hybrid
- Hybridradio
- Online Traffic
- Yellow Maps
- (Charging Stations)
- Dynamical POIs
- Navi/card data
- Online Parking and refueling
- Security ...
- Car2X

Media

- Online TV
- Mediastreaming
- NTFS exFAT
- ...

Media Codecs

- MPEG 4 (H.264)
- Xvid Video
- DivX video
- Flash video
- PCM WAVE
- ALAC
- OPUS
- AC3
- AAC
- H.265
- MSS
- HDS
- DASH
- HLS
- DTCP
- ...



Radio

- HD
- DMB
- Sirius
- DAB
- TPEG
- VICS
- M-Shield
- ...

Sound Processing

- Echo Cancelling
- In Car Communication

NAD

- BT
- WLAN; WAPI
- 2G,3G,LTE; E-call

ADAS

- ACC
- Start/Stop
- ...

Autonomous Driving

- -----
- -----

Browser/ConnectWeb

- Browser
- Mirror link
- Apple CarPlay,
- Android Auto
- MFI
- ...

Rearseat Entertainment

- DVD, Streaming

Customers do not pay for connectivity as such. Connectivity is a mandatory feature in cars since introduction of e-call.

Customers as end users pay for user experience. The creation of user experience makes the difference between cars.

User experience is mainly developed by car manufacturers and their tier-1 suppliers.

The value of connectivity to this user experience must be reflected in an aggregated royalty value for the entire stack of SEPs.

The amount of a FRAND royalty for the SEP stack does not have to depend on the position of the licensee within the supply chain.

Practical aspects:

Only one member of the implementation chain should take an exhaustive license.

Different levels of the supply chain can (as agreed individually) contribute to the royalty agreed between Licensor and Licensee

The automotive industry relies on a strong licensing model in which suppliers of components will provide their products with all required patent licenses.

The complexity of vehicles prevents any alternative licensing policy.

This is true both for licenses covering standard essential patents and implementation patents!

Automotive Business needs **high reliability of all partners** during development, production and distribution of cars. **Legal certainty is necessary earliest possible in a wide range of different aspects.**

Conclusion: Freedom-to-operate analysis for digitalization, connectivity and semiconductor by OEMs?
Patent hold-out is not an option for Automotive Business.
Due to increasing complexity supplier's responsibility is a must more than before!

Patent Pools as efficient tools for both SEP Holders and Licensees?

Patent Pool Solutions in Automotive Industry

„Licensee Negotiation Group (LNG)“

- O Proposal of SEP Expert Group**
- O Scenario for the Automotive Sector**

SEP licensing for the IoT will only work with pool solutions both on the licensor and the licensee side.

The complexity of the industries manufacturing products for the IoT prevents individual SEP owners to license all players under FRAND conditions.

The complexity of IoT products and the need to integrate standardized technologies into these products creates a licensing environment which cannot be managed by most IoT implementer companies.

This complexity can be managed by:

- Patent Pools on the SEP owner side**
- Licensing Negotiation Groups (LNGs) on the SEP user side.**

Case Study AVANCI

One-stop Shop



Licenses granted to OEM only

Fixed Price

Does not meet the need
of potential customers!

Tesla same like Dacia?
Porsche same like Toyota?

Licensees no longer need to understand the value of individual company SEP portfolios

At October 2020 “the Avanci platform includes 38 licensors in total and has licensed 14 million vehicles in total. The automakers that have taken a **license represented approximately 12% of the total worldwide vehicle production in 2019.**”

Source: THE VALUE OF STANDARD ESSENTIAL PATENTS AND THE LEVEL OF LICENSING by Bowman Heiden, Jorge Padilla and Ruud Peters, 23 October 2020

E.g. : Proposal 75 of SEP Expert Group of the European Commission

LNGs negotiate SEP licenses for entire industries, preferably with patent pools but also with individual SEP owners.

LNGs need strong internal rules to avoid anti-competitive behavior and to ensure that SEP licensing does not lead to hold-out.

LNGs need to be attractive to single patent owners as well as to patent pools as negotiations with LNGs can only be efficient on a voluntary basis.

The LNG should be open to any automobile manufacturer or component supplier that wants to participate.

A truly neutral representative should be appointed to conduct independent negotiations on behalf of the LNG for dedicated projects. (Neutral: vis-à-vis the participants of the LNG).

The appointment of the neutral representative should be given by an agency configured as a non-profit entity open to all interested parties.

The neutral representative should operate the business on a day-to-day basis, with strict policies in place to prevent sharing of members' competitively sensitive information.

Members should remain free to negotiate with patent pools independently, and should have an obligation to negotiate in good faith if a patent pool requested to avoid any hold-out.

Fair payment to patent owners and reduction of transaction costs based on relatively high volume.

Transparency to component suppliers and automobile manufacturers.

Strict compliance with antitrust rules.

The result of the negotiations should be:

- **a common understanding about the value of the whole stack of the relevant SEPs,**
- **A common understanding of the relative value of a patent pool portfolio**
- **a scheme to evaluate the royalty share of different patent owners (needed if the negotiating party is an individual SEP owner and not a patent pool)**
- **a master agreement to be used for contracts between the licensor (pool) and a single licensee.**

Policy aspects:

VW Group has given significant contributions and commitments to the needs of patent owners to achieve an effective pool solution for the whole automotive licensing sector.

For the sake of balance it is expected from the patent owners giving contributions and commitments to meet the licensing needs from innovative automotive manufacturers and suppliers.

Diskussion der eingangs formulierten Thesen:

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Vielen Dank für Ihre Aufmerksamkeit!

Gibt es Fragen oder Anmerkungen?