Digitalpatente und KI basierte Use Cases für KMUs

AWS
Webinar
02.03.2021

Prof. Dr. Alexander J. Wurzer
CEIPI: Center for International Intellectual Property Studies

CEIPI is a European Center of Excellence for Intellectual Property and an international IP training and research center.

The Central European Training Center for Authorized Representatives to the EPO

An institute at the Law Faculty of the University of Excellence Strasbourg

The European IP institutions run the Executive Board

Training in 36 European cities

1,200+ participants p.a. in CEIPI training programs

TOP 50 Global Think Tank
Trends in the Application of Digital Patents

Figure E1

Global growth of IPFs in 4IR technologies versus all technology fields, 2000-2018

Source. European Patent Office

[Link to the EPO study]
Trend of Applications: AI/Blockchain

Figure 4: Blockchain Patent Applications and Grants

- Link Trend Analysis Blockchain-Technologies
- Link Trend Analysis bei IOTA-Technologies
- Link to the AI Initiative of European Patent Office
- Link WIPO Initiative
CEIPI Education in IP Management

- **Course of studies**
  Founded in 2006 to enable the European industry to gain competitive advantage in digital transformation

- **Executive IP Management Days**
  Annual exchange of industry best practice

- **Conferences**
  Interdisciplinary exchange between industry, academia and institutions to push the development of economic benefits of IP

- **Graduate School**
  Graduate school dedicated to industrial subjects with graduate students from the industry

- **Blog**
  Communication platform for customer-focused IP strategies in times of digitization (www.ipbusinessacademy.org)
Philips / Signify: Use Case Business

Each year, Signify invests hundreds of millions of Euros for research and development of new technologies and products. In the course of the research and development work these technologies and products are also protected by patents. We decided to make many of these Signify developed technologies available to those wishing to use them by granting licenses under its patents and sometimes also the related know-how. The conditions of licensing vary for the different technologies.

Link to the business model of Signify
Evolution of Industrial Digitalization

Phase 1: Digitization of the machine

Phase 2: Digitization of the machine environment

Phase 3: Digitization of the Ecosystem

Relocation of the system boundaries
The Success of IP is Determined within the Market
Example: Netflix (US)

Physical world

Physical product
Layer 1

Sensor and actuator
Layer 2

Connectivity
Layer 3

Analytics
Layer 4

Digital service
Layer 5

Displaying data associated with a program based on automatic recognition
EP3138296B1

Fault detection in streaming media
EP2654225B1

Parallel streaming
EP2545459B1

Application discovery
EP2680500B1

Securely connecting control device to target device
EP2852122B1

Digital world

The Success of IP is Determined within the Market
Example: Netflix (US)
The Success of IP is Determined within the Market
Example: ThyssenKrupp (DE)

Physical product
Layer 1

Sensor and actuator
Layer 2

Connectivity
Layer 3

Analytics
Layer 4

Digital service
Layer 5

Method of planning a platform lift
WO 2018193034 (A1)

App + Hololens
Enhanced Sales Productivity

IP-Design at ThyssenKrupp and Microsoft
The Success of IP is Determined within the Market
Example: Tencent (CN) + Mirriad (GB)

- Physical product
  Layer 1

- Sensor and actuator
  Layer 2

- Connectivity
  Layer 3

- Analytics
  Layer 4

- Digital service
  Layer 5

- System and Method Producing Video Data
- Identifying Segments of Video Data for the inclusion of additional video objects
- Producing Video Data EP 3 076 681 B1
- Apparatus and method for identifying insertion zones
- Processing and Apparatus for Advertising Component Placement

- Patent Strategies for AI-based Product Placement

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Goal of an IP Strategy: Creating Added Value Positions with the Customer

Sphere of exclusivity
- Based on a distinctive customer benefit
- Long lasting
- Defensible (also legally)

Strategic prohibition creates exclusive market positions for you.

Competitors can no longer place their offer on the market.

Customer benefit offered by the competition

Willingness to pay among markets / customers

The customer exclusively uses your offer.

Your offer

Customer benefit meaning
IP Design in the Digital Transformation

- Digital service (Layer 5)
- Analytics (Layer 4)
- Connectivity (Layer 3)
- Sensor and actuator (Layer 2)
- Physical product (Layer 1)

Digital Global

Customer benefit meaning

Willingness to pay

Physical Local

IP Design in the Digital Transformation

Digital world

Digital service
Layer 5

Analytics
Layer 4

Connectivity
Layer 3

Sensor and actuator
Layer 2

Physical world

Physical product
Layer 1

Digital Eco-System

Customer benefit
meaning

Willingness to pay

Physical Local

Physical world

Digital Global

IP Design in the Digital Transformation

The Success of IP is Determined within the Market by Exclusive Value Creation

INDUSTRY CASE STUDY

Link Case Study Hilti

Hilti
Business model transformation to adapt to the digitization in the construction industry
By Alexander J. Wurzer & Dr. Stefan Nolten
Dr. Oliver Seifert

Link Case Study Heraeus

Heraeus
From amorphous metals to digital business models
By Alexander J. Wurzer, Dr. Jurgen Wachter
Use case: Destroying parasites on fish
Use case: Destroying parasites on fish

The salmon market:
- Around 70% of Atlantic salmon is produced in aquaculture
- Aquaculture harvest grows by 7% per year since 2010
- 1.3 million tons per year (more than half of the world harvest) are harvested in the North Sea

Risk factors:
- A main risk factor in salmon farming are parasites such as sea lice
- Sea lice are classically controlled by good animal husbandry practice
- Also, the use of mechanical tools, such as special nets or physical lice removal systems, keeps fish healthy
- Esben Beck had the idea to use instead lasers for the lice removal
Use case: Destroying parasites on fish

The solution:
- Esben Beck developed a submergible device to remove sea lice from salmons with lasers
- The device uses artificial intelligence to analyze the surface and path of the fish
- Underwater lasers and mirrors are used destroy the parasites

The advantages:
- Compared to tradition methods, fish are less stressed and harmed by the lasers
- The device can be operated 24/7 without any human guidance

The company:
- Esben Beck founded his SME Stingray Marine Solutions AS in 2012, which has now 50 employees and yearly sales of the AI driven devices of 10 million €
- He was nominated in 2019 for the European Inventor Award of the EPO in the category SME and his patent : EP2531022B1 Method and device for destroying parasites on fish
University Certificates and Diploma in IP Management
Cooperation CEIPI and AWS

Education in IP Management in distance learning:

8 independent university certificiates in IP management

• IP Strategy development
• IP Valuation I
• Integrated IP and innovation management
• IP in the industry 4.0
• IP valuation II
• Quality in operational IP management
• IP portfolio management and controlling
• Leadership in IP management

University diploma
IP Business Administration

• Consists of all 8 certificates
• and a final examination

More Information:

Link to the IP B.A. Program with the AWS
University Certificates and Diploma in IP Management
Cooperation CEIPI and AWS

Werden Sie ein Experte im IP Management
IP-Management Ausbildung CEIPI & AWS

Programm

Die Ausbildung ist jederzeit online möglich, die Kurse sind individuell buchbar. Sie können entweder an allen acht Kursen teilnehmen und damit ein Universitäts-Diplom erwerben, oder je nach Bedarf einzelne Kurse belegen.

Wichtiges in Kürze

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<td>Universitätszertifikat der Universität Strasbourg, CEIPI</td>
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More Information:  
[Link to the IP B.A. Program with the AWS]