Highlights on the EPO and automotive landscape

Automotive & Mobility Seminar, Chicago
The EPO mission

We provide:
✓ patent protection for inventions
✓ in up to 44 countries
✓ on the basis of one single application

The European Patent Organisation

- 38 member states
- 2 extension states
- 4 validation states
- EPO locations
Key facts about the EPO

- 2nd largest intergovernmental institution in Europe
- Self-financing: Budget of EUR 2.3bn without any public funding
- 7,000 employees, of which around 4,400 highly qualified patent examiners working in all fields of technology
Geographic origin of European patent applications

European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period. The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle).

- United States: 26%
- EPO states: 47%
- Japan: 13%
- R. Korea: 4%
- P.R. China: 5%
- Others: 5%

Growth of applications volume + 5.8%
Increasing demands for patents worldwide

Source: WIPO
Increasing output since 2010

Production
Search, examination, opposition

+36%

 Granted patents
 Published patents

+82%

Source: EPO
European Patent Office
EPO performance allows for fee reductions

- since 2010: EP fees stable (only slight inflation adjustment)
- since 2012: PCT fees not increased (not even for inflation)
- from 2018: PCT fees will be reduced by 5%

It's estimated that the measures above will save our applicants a combined total of **25 million Euro next year**
Further validation agreements are in the pipeline

- 38 European member states
- 2 European extension states
- 4 Validation states
- 21 Pending agreements

¹ 17 countries
Export your invention all over the world

European Patent Office
- finds claims patentable
- International Search with positive written opinion
- International Preliminary Examination Report with positive written opinion
- European Search with positive written opinion

Patent Prosecution Highway
- + expedited grant in the European regional phase

15 Partner offices
- expedite prosecution
- JP, KR, CN, US, AU, BR, CA, CO, EAPO, IL, MX, MY, PH, RU, SG
Leading role in international cooperation

Global benchmark for tools
- CPC
- Patent Translate
- Asian documentation
- EPOQUE – World’s largest database
- Global dossier
- Harmonization of rules and practices

PCT Authority delivering
- 34% of Search Reports: 2 out 3 US companies choose the EPO
- 64% International Preliminary Examination Reports
Key new industries

- **Medical technology**: 13,090 applications in 2017, +17.5% compared to 2010.
- **Digital communication**: 11,694 applications in 2017, +39.0%.
- **Computer technology**: 11,174 applications in 2017, +29.2%.
- **Electrical machinery, apparatus, energy**: 10,402 applications in 2017, +21.9%.
- **Transport**: 8,217 applications in 2017, +29.1%.

Source: European Patent Office
The 4th industrial revolution in EP applications

- **Applications** (e.g. manufacturing, vehicles, personal)
- **Enabling technologies** (e.g. AI, 3D, security)
- **Core technologies** (hardware, software, connectivity)
Software in automotive and aerospace

Share of European patent applications with software (computer-implemented invention – CII) content

<table>
<thead>
<tr>
<th>Automotive</th>
<th>Aerospace</th>
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<tbody>
<tr>
<td>59.0%</td>
<td>44.5%</td>
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Source: EPO. The reported share of CII is based on the sorting by EPO examiners of random samples of EP applications in the aerospace and automotive technology areas. The sorted samples for aerospace and automotive each consisted of 500 European patent applications published in 2015.
Changing landscape for automotive industry
Blockchain applications in Automotive & Mobility

- Vehicle Digital identity and history
- Location in space and time
- Supply chain
- Usage based Taxes
- Vehicle and ride sharing
- Congestion fees
- Mobility commerce platform
- Autonomous machine payments
- Pollution Taxes
- Carbon pricing

Life cycle: Manufacturing | Usage | Recycling
Three sectors for greater agility

Information and Communications Technology

Mobility and Mechatronics

Health, Biotechnology and Chemistry

Medical technology

Digital communication

Computer technology

Electrical machinery, apparatus, energy

Transport
Dedicated opposition directorates

- Expertise of opposition directorates
  - Examiners experienced in opposition
  - Dedicated team of Formalities Officers
  - All opposition administration
Conclusion: the EPO in 2017

- Demand is growing, reinforcing Europe's attractiveness as a leading innovation market

- Reforms have proven to be successful, increasing quality, efficiency and cost control

- International influence has grown

- 20 years CII solid practice, forming the basis for a sound patent system for AI and the Fourth Industrial Revolution
Outlook for the future

Patent granting process:

✓ First priority: to continue delivering high quality / legally solid patents

✓ Moving towards a fully end-to-end digitalised "EPO 4.0" using the most advanced technologies

✓ Implementation of the Unitary Patent

Playing a leading role in Artificial Intelligence

✓ and more globally in the Fourth Industrial Revolution
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