The European Patent Office and Technology Transfer

A look at the latest developments and projects
Overview of the presentation

- EPO and Tech Transfer: Why?

- The PATLIB 2.0 project, the PATLIB network and Tech Transfer

- EPO and Tech Transfer: Today and Tomorrow
Our mission

As the patent office for Europe, we are proud to deliver high-quality patents and efficient services that foster innovation, competitiveness and economic growth.
Smaller entities represent a significant portion of applications in Europe - 2019

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Large enterprises</td>
<td>72% (71, 69, 66, 69 %)</td>
</tr>
<tr>
<td>Universities and public research organisations</td>
<td>10% (9, 7, 6, 5 %)</td>
</tr>
<tr>
<td>SMEs, individual inventors</td>
<td>18% (20, 24, 28, 26 %)</td>
</tr>
</tbody>
</table>

1 This breakdown is based on a large representative sample of patent applications filed with the EPO in 2019 by applicants located in member states of the European Patent Organisation. 2 This category includes technology transfer offices that while registered as corporate entities are clearly affiliated to a university or public research organisation. 3 SMEs have been identified based on the European Commission definition of SMEs (2003/361/EC). According to this definition, an SME is i) an independent company with ii) less than 250 staff and iii) a turnover below €50 million and/or a balance sheet below €43 million. Detailed financial data and company ownership data from the BvD Orbis database have been used to enable a strict application of this definition.
Smaller entities represent a significant portion of applications in Europe - 2020

- Large enterprises: 74%
- Universities and public research organisations: 5%
- SMEs and individual inventors: 21%

Source: EPO.

This breakdown is based on a large representative sample of patent applications filed with the EPO in 2020 by applicants located in member states of the European Patent Organisation. SMEs have been identified based on the European Commission definition of SMEs (2003/361/EC). According to this definition, an SME is i) an independent company with ii) less than 250 staff and iii) a turnover below €50 million and/or a balance sheet below €43 million. Detailed financial data and company ownership data from the BvD Orbis database have been used to enable a strict application of this definition. The category "public research organisations" includes technology transfer offices that while registered as corporate entities are clearly affiliated to a university or public research organisation.
Growth of European patent applications

<table>
<thead>
<tr>
<th>Year</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>159,087</td>
</tr>
<tr>
<td>2017</td>
<td>166,594</td>
</tr>
<tr>
<td>2018</td>
<td>174,481</td>
</tr>
<tr>
<td>2019</td>
<td>181,532</td>
</tr>
<tr>
<td>2020</td>
<td>180,250</td>
</tr>
</tbody>
</table>

-0.7%

European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.
# Top countries for European patent applications

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>2020 Applications</th>
<th>2020 Shares</th>
<th>Change Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
<td>44,293</td>
<td>25%</td>
<td>-4.1%</td>
</tr>
<tr>
<td>2</td>
<td>Germany</td>
<td>25,954</td>
<td>14%</td>
<td>-3.0%</td>
</tr>
<tr>
<td>3</td>
<td>Japan</td>
<td>21,841</td>
<td>12%</td>
<td>-1.1%</td>
</tr>
<tr>
<td>4</td>
<td>P.R. China</td>
<td>13,432</td>
<td>7%</td>
<td>+9.9%</td>
</tr>
<tr>
<td>5</td>
<td>France</td>
<td>10,554</td>
<td>6%</td>
<td>+3.1%</td>
</tr>
<tr>
<td>6</td>
<td>R. Korea</td>
<td>9,106</td>
<td>5%</td>
<td>+9.2%</td>
</tr>
<tr>
<td>7</td>
<td>Switzerland</td>
<td>8,112</td>
<td>5%</td>
<td>-1.9%</td>
</tr>
<tr>
<td>8</td>
<td>Netherlands</td>
<td>6,375</td>
<td>4%</td>
<td>-8.2%</td>
</tr>
<tr>
<td>9</td>
<td>United Kingdom</td>
<td>5,715</td>
<td>3%</td>
<td>-6.8%</td>
</tr>
<tr>
<td>10</td>
<td>Italy</td>
<td>4,600</td>
<td>3%</td>
<td>+2.9%</td>
</tr>
</tbody>
</table>


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 first-named applicant principle.
Principal Directorate Patent Knowledge and TT-2: The “PATLIB 2.0” Project

- Support technology transfer in Europe

- Facilitate technology transfer and IP commercialisation and the involvement of the PATLIB network in these activities

- Vital for the success of PATLIB 2.0: close cooperation with the national patent offices!

- Official Launch: PATLIB Conference (online) May 2021
What is a PATLIB precisely?

PATLIB CENTRES

“Your first point of contact in patent information matters”

Over 300 PATLIBs spread regionally across the EPO's member states.

https://www.epo.org/searching-for-patents/helpful-resources/patlib.html
PATLIBs: what services do they offer?

Each PATLIB has its own catalogue of services.

- All PATLIBs provide information on patent filing strategy and basic patent searching. Other services that may be provided:
  - Assistance on other intellectual property rights, such as trademarks.
  - Technology and competitor watches
  - Patent statistics
  - Patent valuation/audits
  - Guidance on commercialisation/technology transfer.
TTO and PATLIBs: a synergy?

“The resource endowment of the TTO/TLO is regarded as sufficient for only 37% of patented inventions. Especially in southern and eastern Europe, where TTO/TLOs tend to be smaller in size, a clear lack of resources is reported (48% vs 14%).”

(“Valorisation of scientific results” study, p. 9)

- Could a closer cooperation with the PATLIB network somehow compensate for the lack of resources?
EPO Activities relevant to TT (European Patent Academy, PD Patent Knowledge):

- Support to /cooperation with universities, NPOs, TTOs and research institutions, for instance by participating in their IP/TT related events

- Cooperation with the European Commission and major organisations active in TT (e.g. ASTP, WIPO/TISC network, EEN)

- On-line (when possible on-site) workshops/courses and e-learning modules [https://e-courses.epo.org](https://e-courses.epo.org)

- Meetings with stakeholders/conferences (e.g. High Growth Technology Business Forum, organised by the EP Academy [https://www.epo.org/news-events/events/conferences/high-growth-technology-business-forum.html](https://www.epo.org/news-events/events/conferences/high-growth-technology-business-forum.html))
Ongoing initiatives – upcoming conference

- University day / Patent Knowledge Week (4/11/2021)

https://www.epo.org/news-events/events/conferences/patent-knowledge-week.html
Ongoing initiatives - 1

- Within the **PATLIB 2.0 project**:
  - Survey and self assessment on PATLIBs’ activities and services, including those related to TT
  - External expert study on the TT European landscape and the PATLIB involvement in it.
  - PATLIB (TT) Training
  - Exploring the European Tech Transfer professional accreditation landscape and the possible EPO role in it
  - Customer Discovery Programme

- TT-specific cases studies (Chief Economist Unit)- the 1\textsuperscript{st} three are available on our website
  
Ongoing initiatives - 1

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Ongoing initiatives - 2

Survey and self-assessment on PATLIBs’ activities, including those related to TT
Self-assessment results

Status 6 July 2021  - 268 centres
Self-assessment results

Status 6 July 2021 - 268 centres

- Level 0: 12%
- Level I: 26%
- Level II: 18%
- Level III: 8%
- Mis-matches: 36%
Ongoing initiatives - 3

PATLIB (TT) training

- PATLIB Experts’ Network (~100 experts in different areas)
## Ongoing initiatives - 3b

<table>
<thead>
<tr>
<th>Online seminar</th>
<th>Espacenet advanced</th>
<th>Level II / III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online seminar</td>
<td>European Patent Register Services</td>
<td>Level II</td>
</tr>
<tr>
<td></td>
<td>advanced</td>
<td>Level III</td>
</tr>
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<td>Online seminar</td>
<td>Global Patent Index advanced</td>
<td>Level II</td>
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<tr>
<td></td>
<td></td>
<td>Level III</td>
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<td>Level II</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Level III</td>
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<tr>
<td>Available material</td>
<td>IP Teaching Kit</td>
<td>ALL levels</td>
</tr>
<tr>
<td>Self-paced e-learning</td>
<td>Intellectual property rights</td>
<td>Level I</td>
</tr>
<tr>
<td>Self-paced e-learning</td>
<td>From idea to patent</td>
<td>Level I</td>
</tr>
<tr>
<td>Self-paced e-learning</td>
<td>Think patents: the value of patent</td>
<td>Level I/II</td>
</tr>
<tr>
<td></td>
<td>documentation for innovation and research</td>
<td></td>
</tr>
<tr>
<td>Self-paced e-learning</td>
<td>Business use of patent information</td>
<td>Level II</td>
</tr>
</tbody>
</table>
Ongoing initiatives - 4

External expert study on the TT European landscape and the PATLIB involvement in it.

Some possible action points from the study:
Ongoing initiatives - 4a

1) Exchanging (best) practices, identifying training needs, assessing how organisations like ASTP could support the TT activities of PATLIBs-ASTP experts to train PATLIBs?

2) Bringing TTOs and PATLIBs closer to one another and promoting their mutual cooperation

3) Engaging in/lobbying with TTOs to encourage researchers to use patent search.

4) Create an I-Corps™ or similar type of support scheme.
Ongoing initiatives - 5

Exploring the European TT professional accreditation landscape and the possible EPO role in it

ATTP, CLP
Ongoing initiatives - 6

Customer Discovery Programme for PATLIBs (T. Withnell, at the EPO, PATLIB Team since August 2021)

• Similar concept as the NSF I-Corps\textsuperscript{tm}
Ongoing initiatives - 6a

NSF I-Corps\textsuperscript{tm}

Program:
- entrepreneurial education,
- mentoring,
- funding

Aim:
- To accelerate the translation of knowledge derived from fundamental research into emerging products and services that may attract subsequent third-party funding.
Ongoing initiatives - 6a

NSF I-Corps™

- **Structure**
  - Participants’ teams get USD 50k to find the market for their technology / invention.
  - Interviews with target customers – Duration: Six months

- **Teams have typically 3 members**
  - Entrepreneurial Lead – typically researcher
  - Technical Lead – typically senior scientist
  - Industry Mentor – expert in transitioning technology out of academic labs.

- **Training is in 3 parts**
  - Kick-off meeting with Entrepreneurial Immersion Training
  - Weekly training meetings
  - Lessons Learned Closing Presentation
Conclusions

The EPO

- Fosters innovation, and thus patent valorisation

- Supports IP awareness and technology transfer initiatives (courses, workshops, fairs, conferences, B2B etc.)

- Aims to reinforce cooperation with players in the IP/TT field

- In the framework of the PATLIB 2.0 project is launching a number of initiatives, such as the Customer Discovery Programme
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Thank you!