Patents: technological trends and examination paradigms

Nic Jones

South America Working Group Lead, CIPA International Liaison Committee

Associate Director, Miller Sturt Kenyon
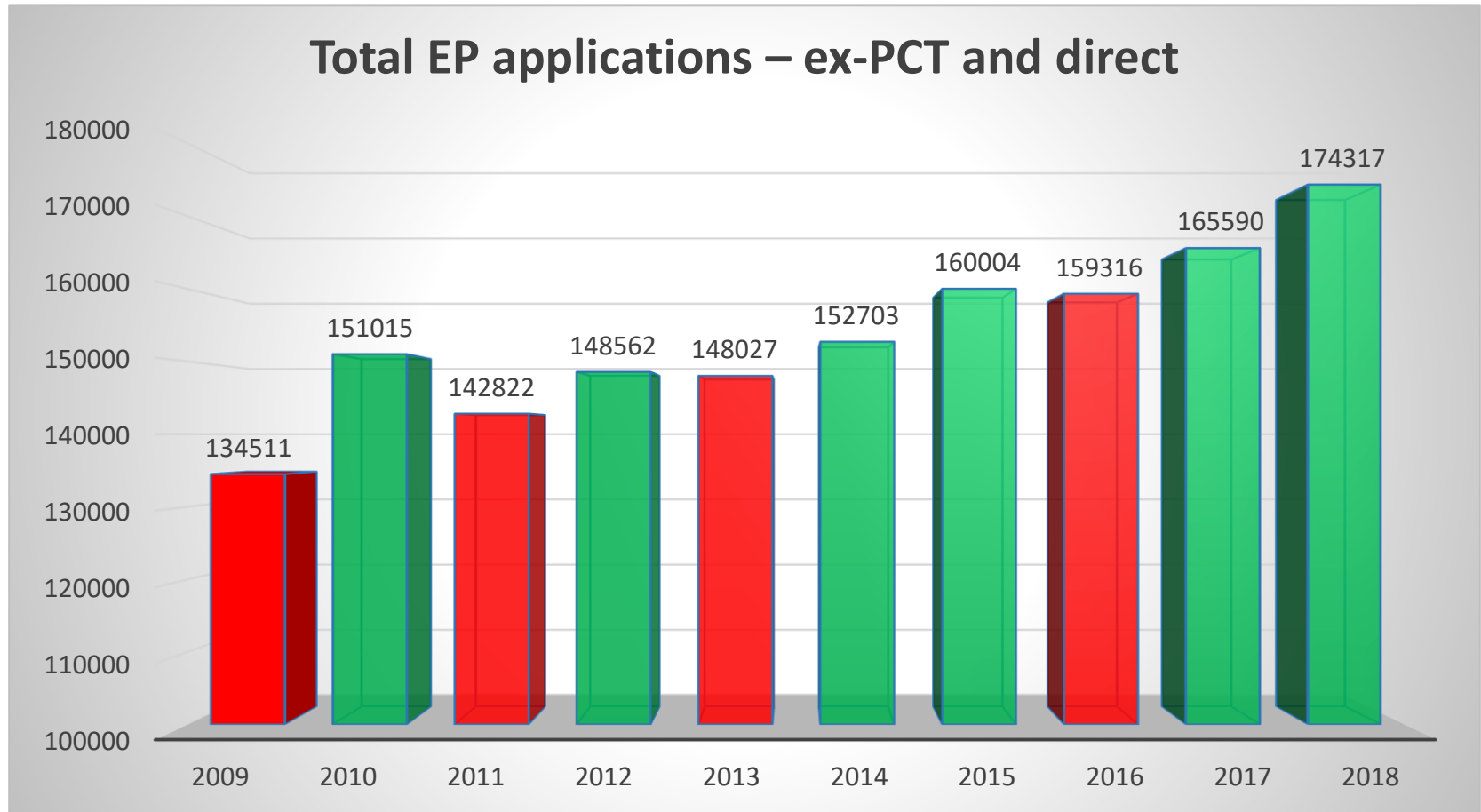
nicjones@mskpatents.com

Trends and paradigms - contents

- Overall technical trends at the EPO
  - Filing statistics
  - Geographic origin, technical trends and top applicants
  - Timeliness
  - Grant rates

- 4th Industrial Revolution
  - Selected technical fields
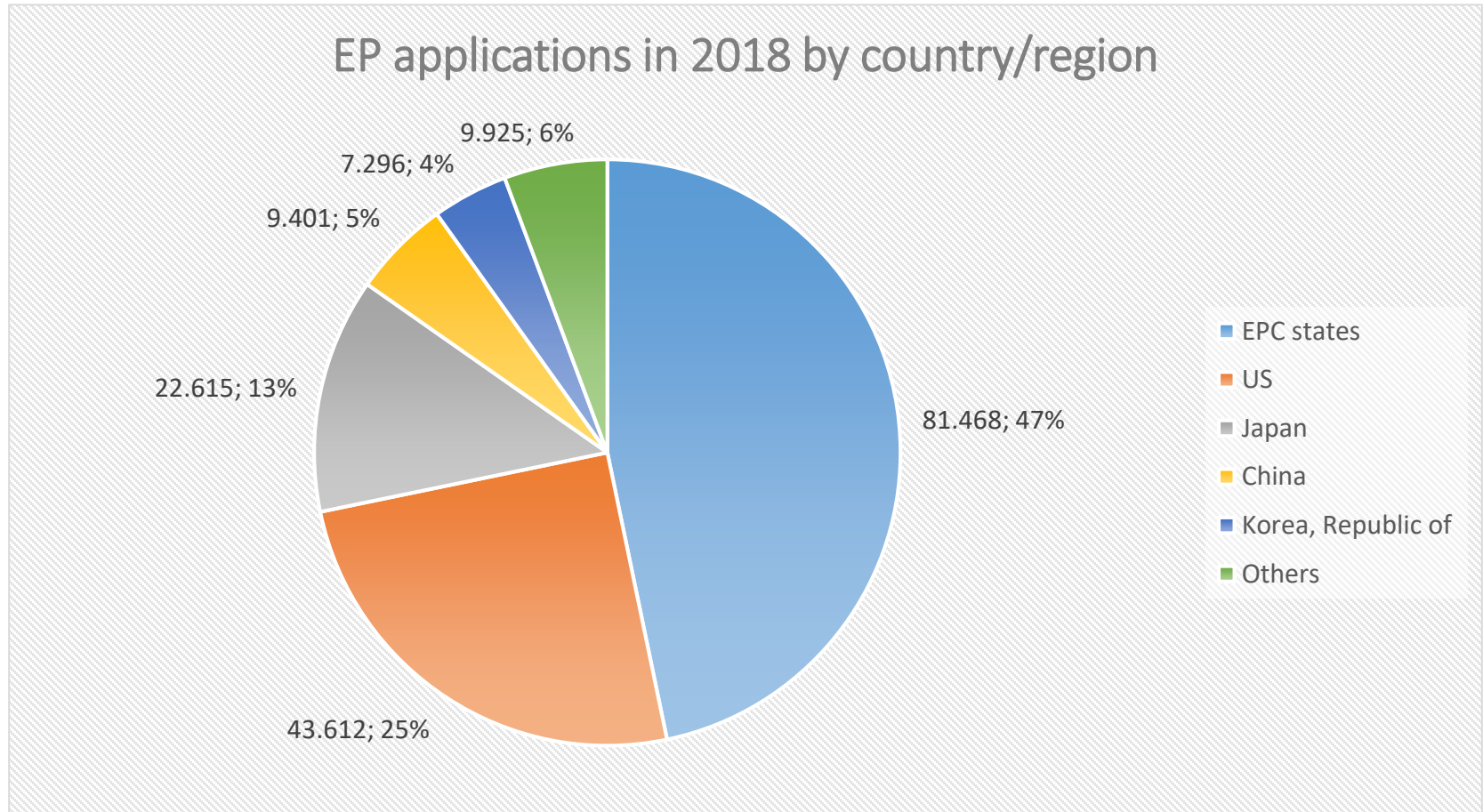 - How are they dealt with

Trends and paradigms

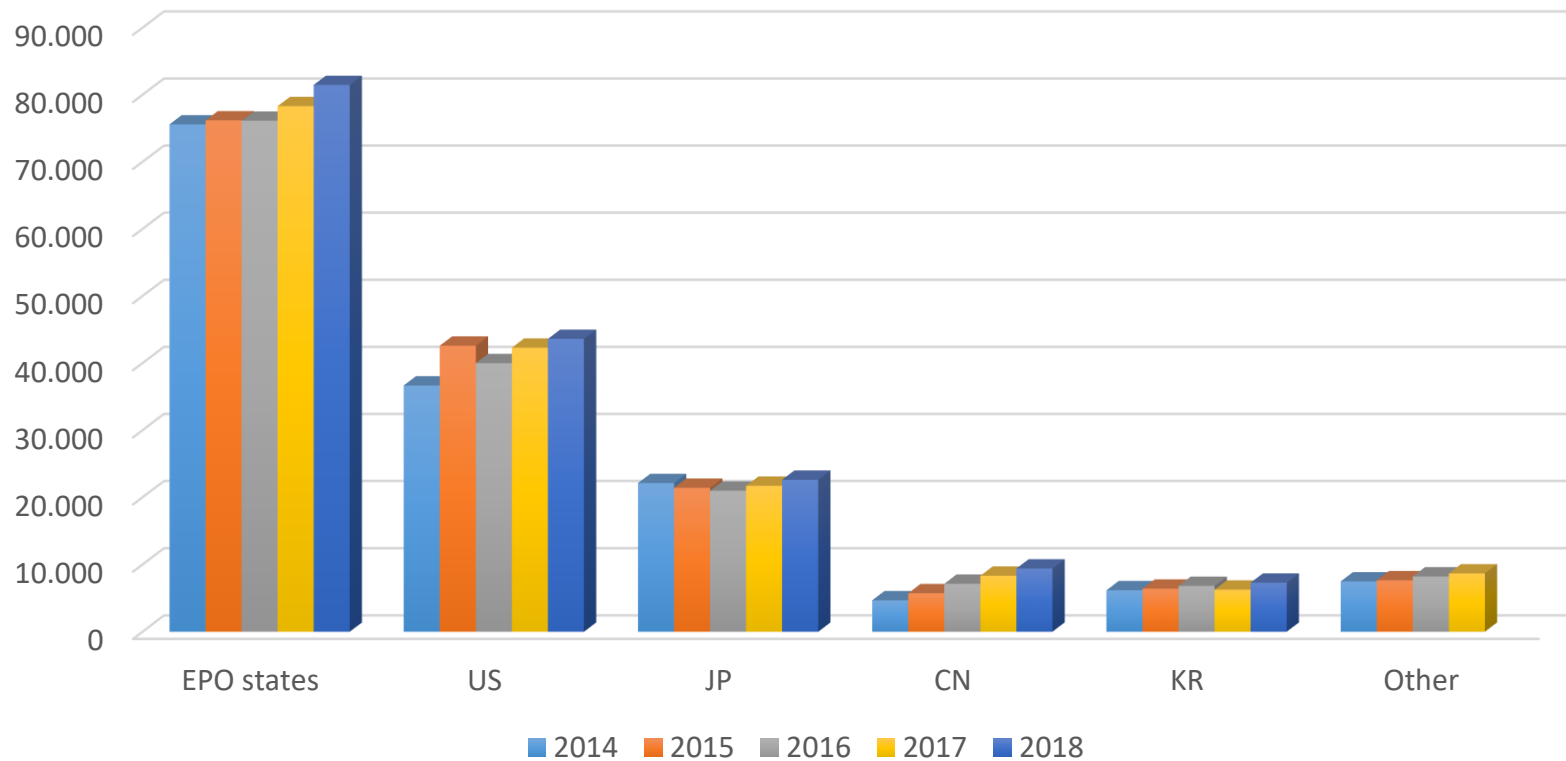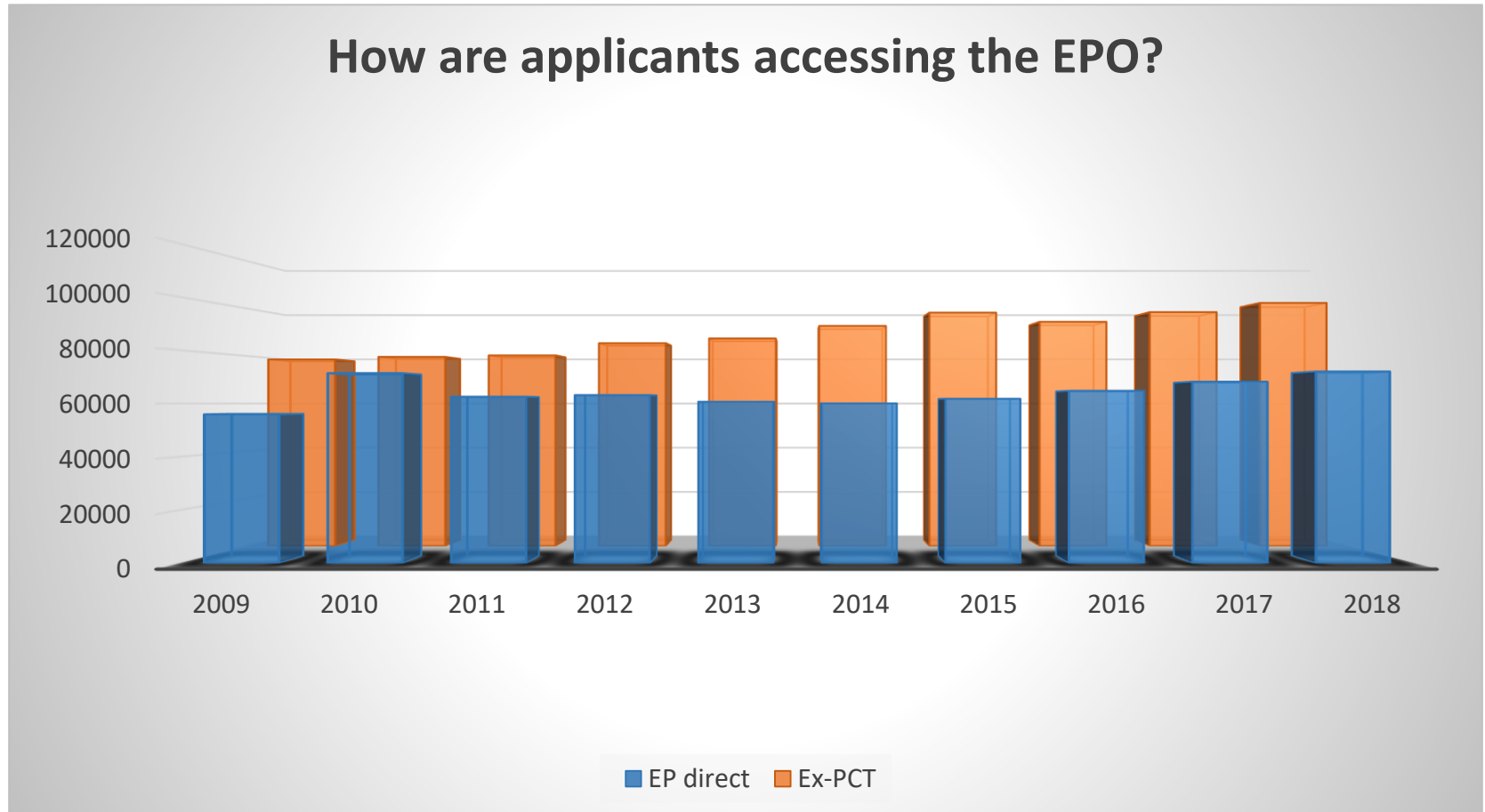Overall technical trends at the EPO

Overall trend - EPO

Total EP applications – ex-PCT and direct

Year	Value
2009	134511
2010	151015
2011	142822
2012	148562
2013	148027
2014	152703
2015	160004
2016	159316
2017	165590
2018	174317

Source: EPO

Geographic origin

EP applications in 2018 by country/region

- 81.468; 47% — EPC states
- 43.612; 25% — US
- 22.615; 13% — Japan
- 9.401; 5% — China
- 7.296; 4% — Korea, Republic of
- 9.925; 6% — Others

Source: EPO

Geographic origin

Filings by origin – absolute figures

Legend: 2014, 2015, 2016, 2017, 2018

Categories: EPO states, US, JP, CN, KR, Other

Source: EPO
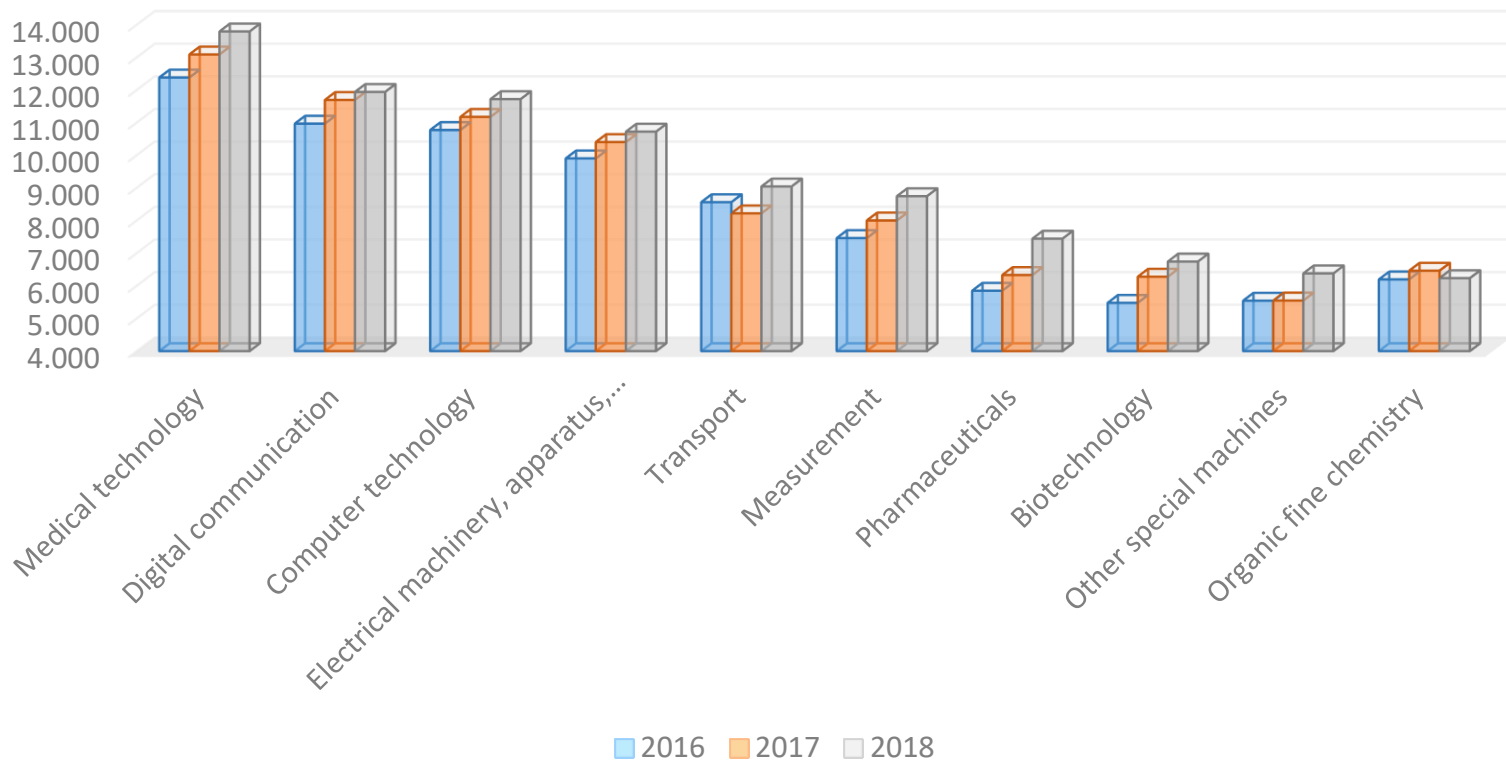
Filing route
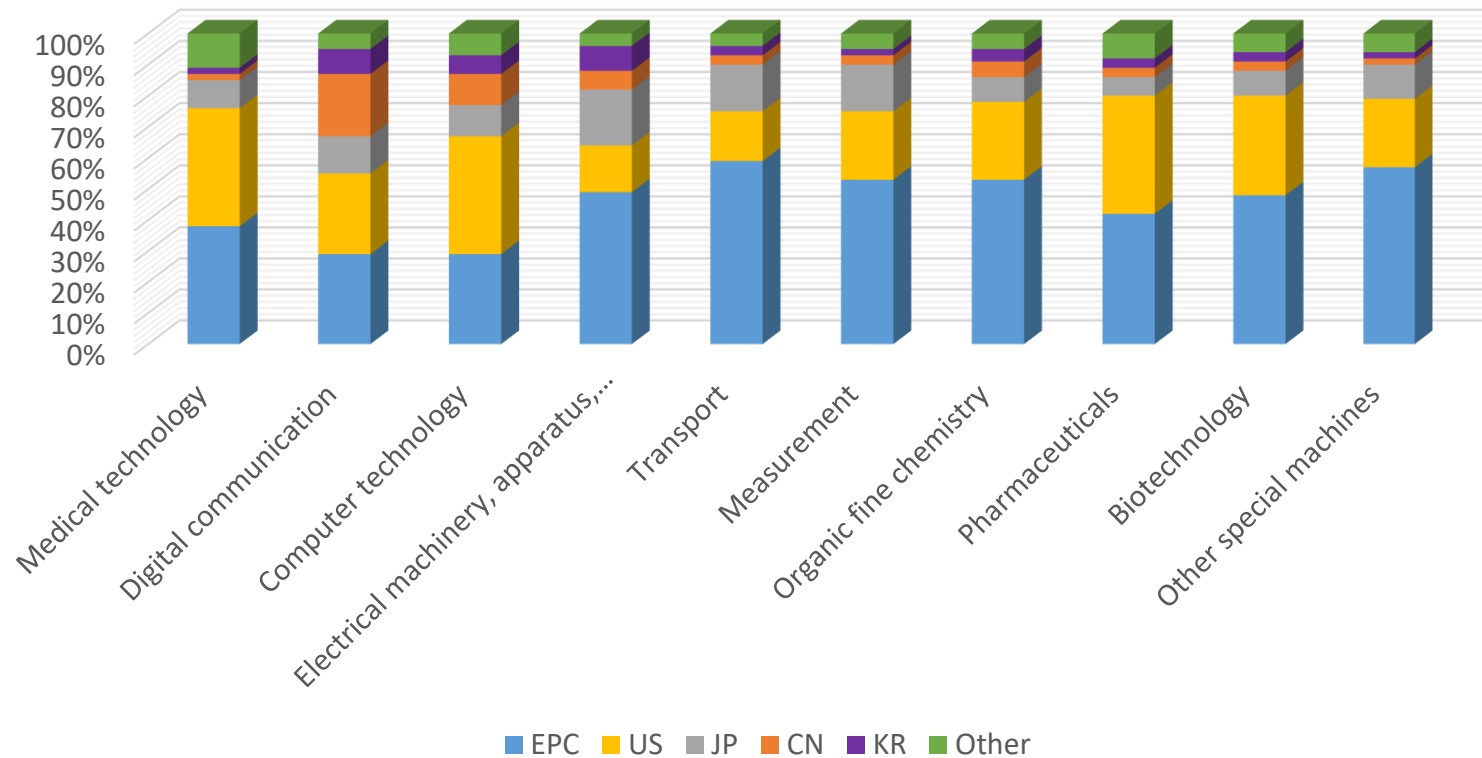

How are applicants accessing the EPO?

Source: EPO

Technical trends

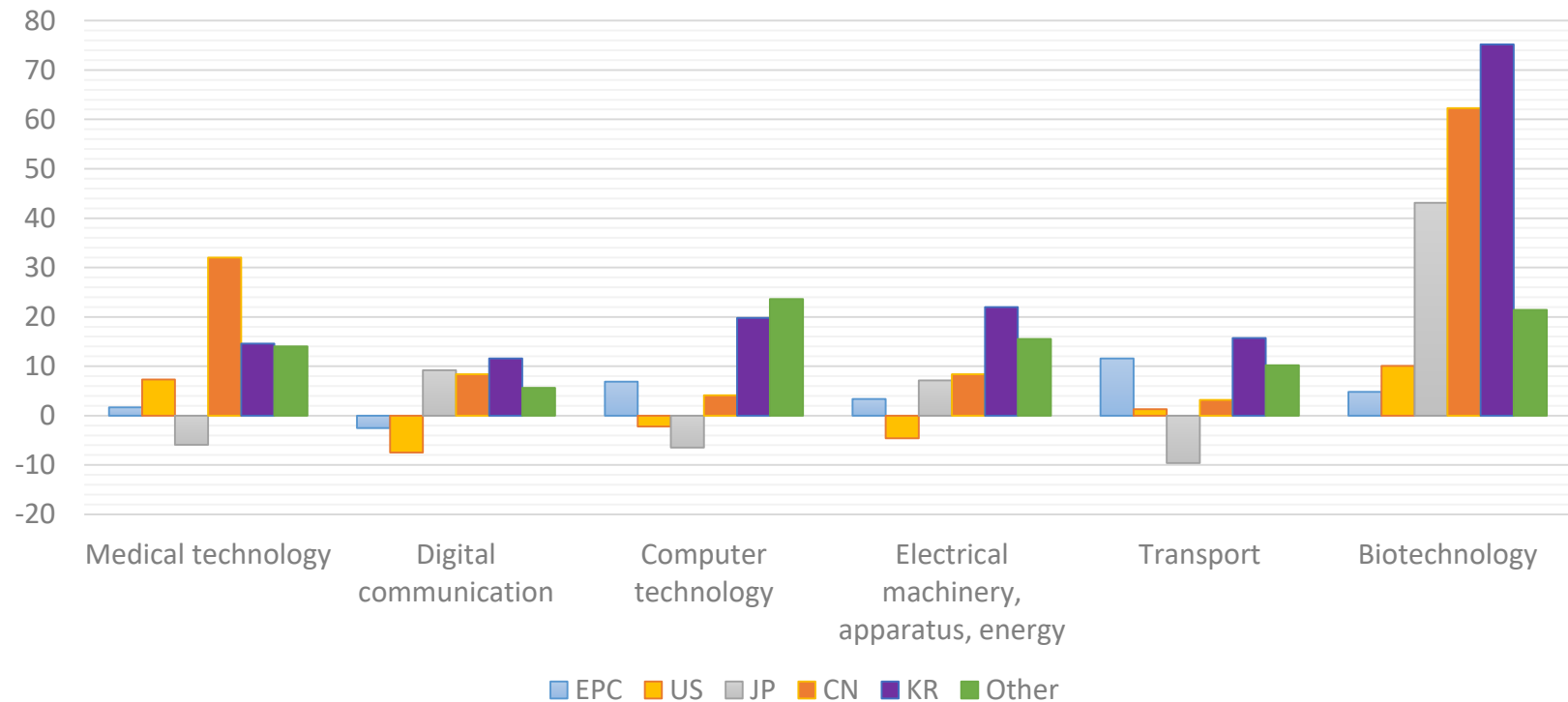Annual growth - top 10 tech fields 2016-2018

Tech field and origin
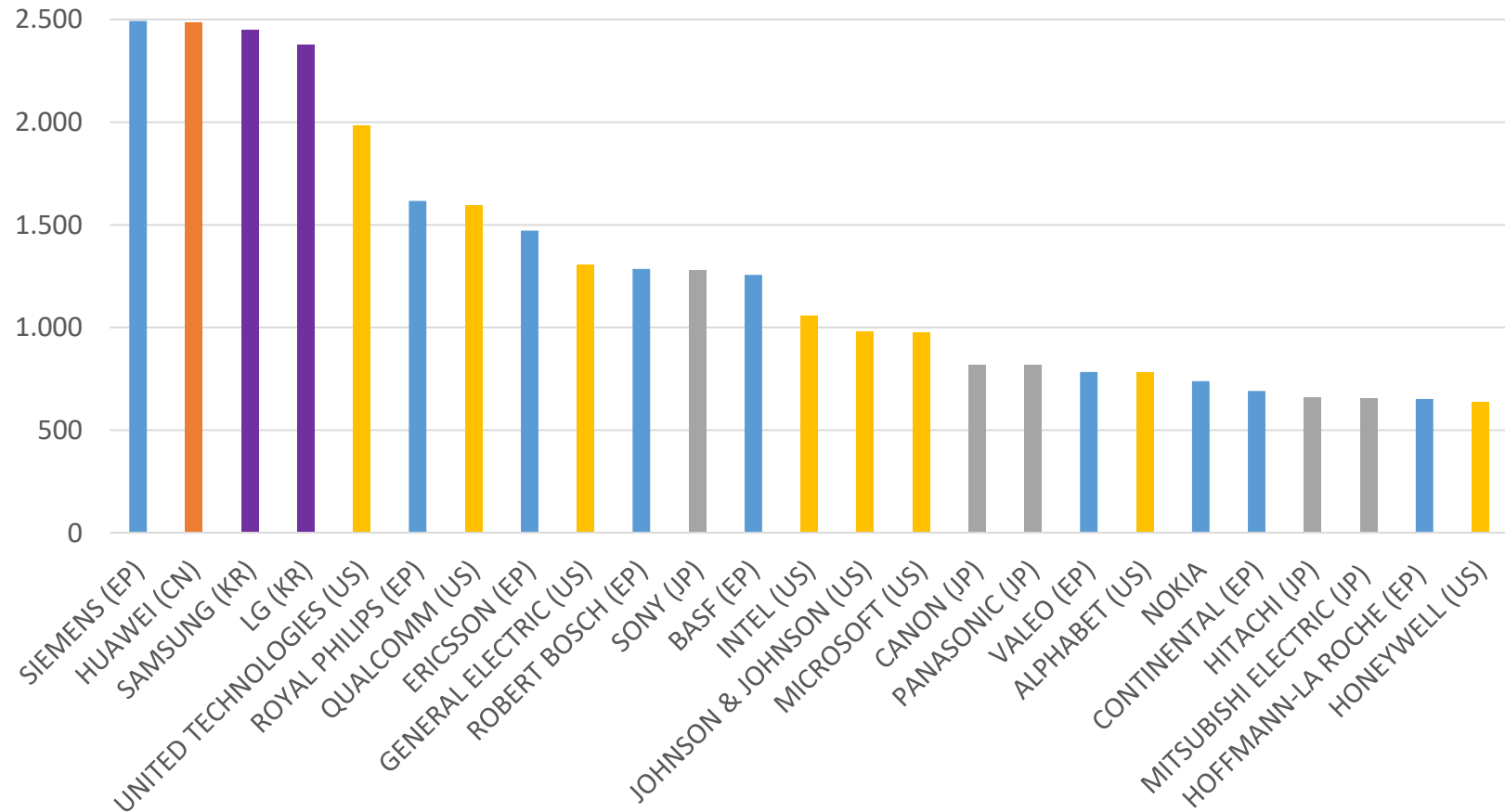

Tech fields – % share by country/region - 2018

Source: EPO

Tech field and origin

Selected top tech fields – % change by country/region – 2018 vs. 2017

Legend: EPC, US, JP, CN, KR, Other

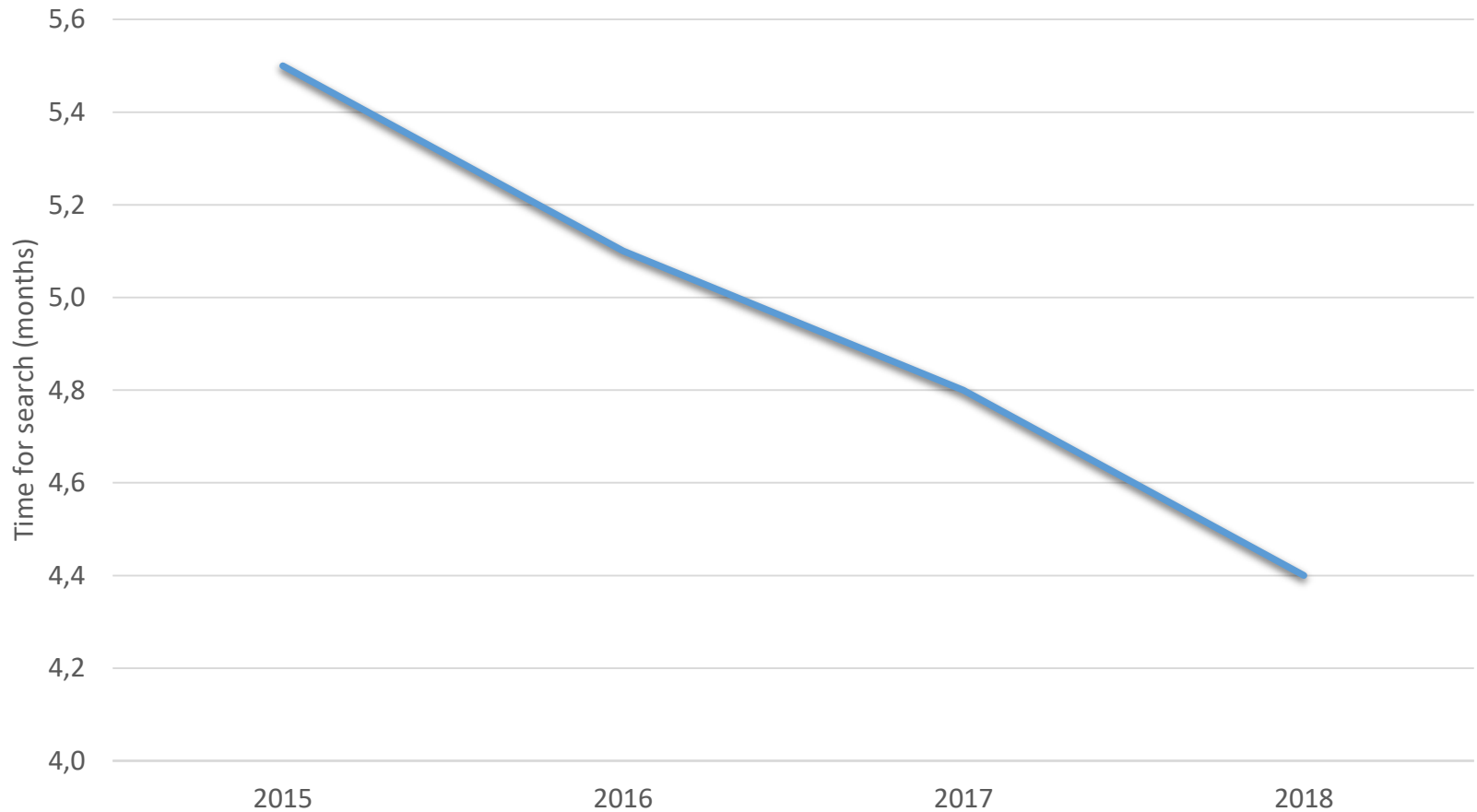Source: EPO

Top 25 EPO applicants - 2018

Source: EPO
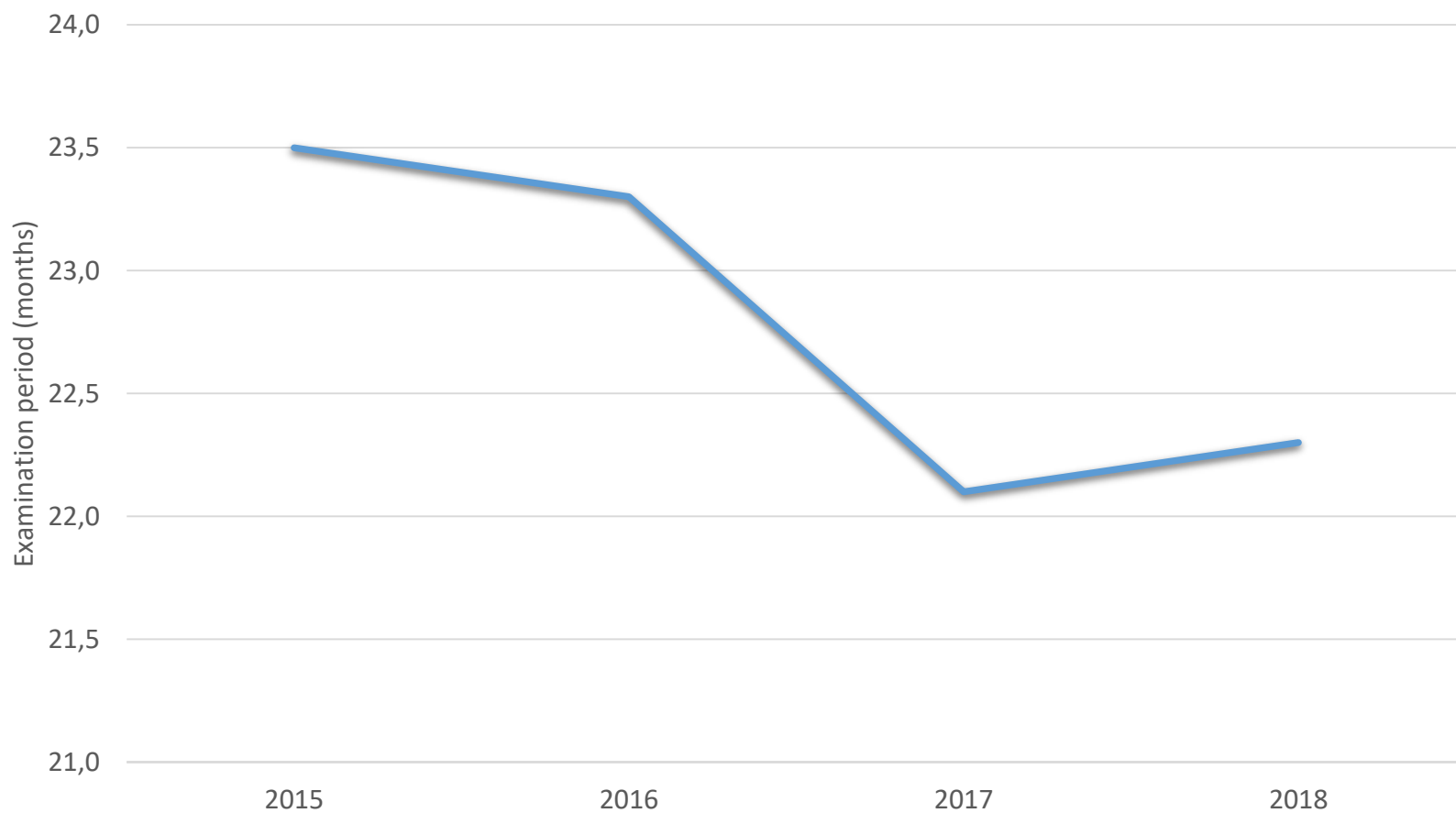
Trends and paradigms

Timeliness, grant rates
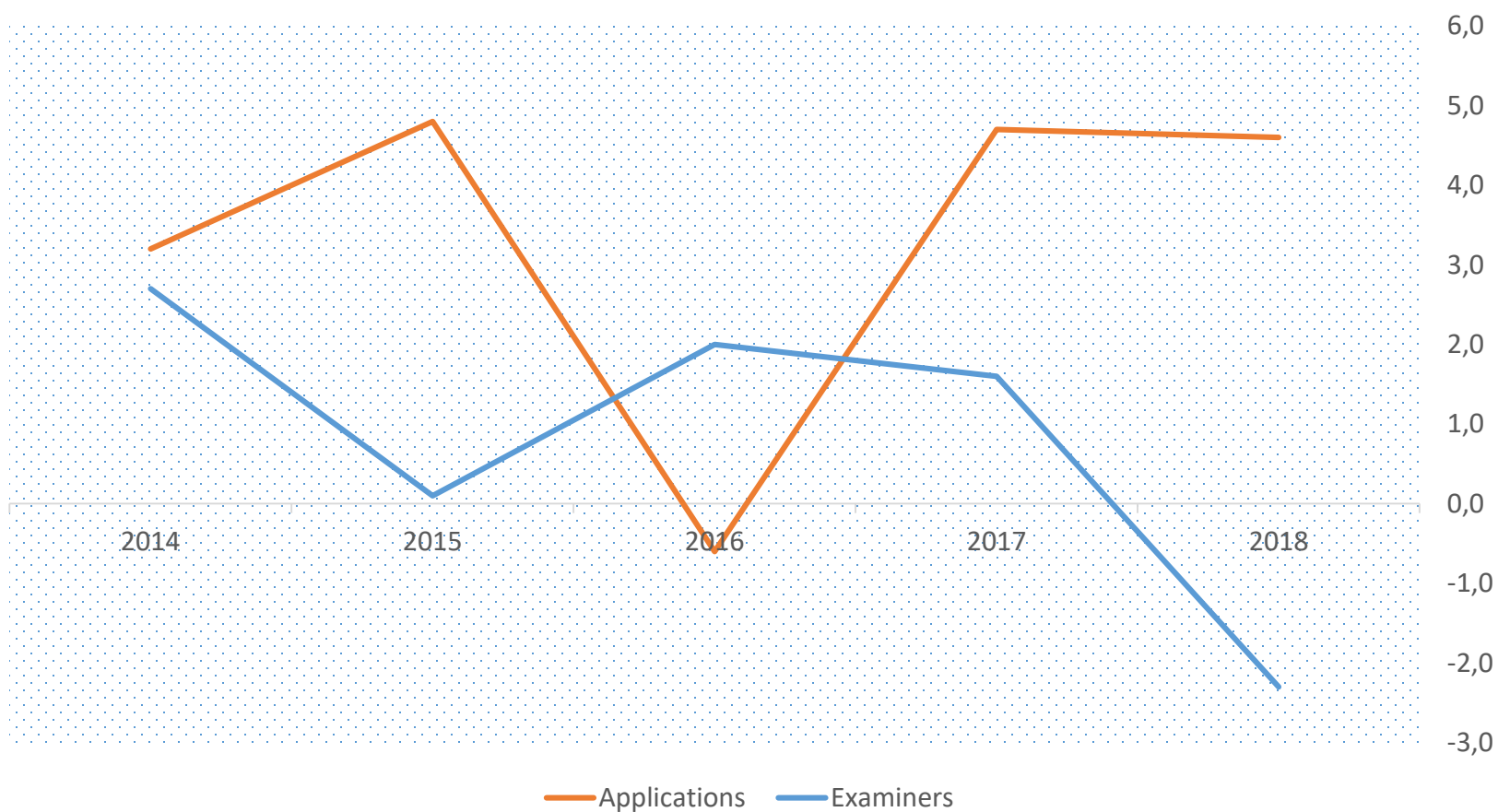
Time for search issuance

Source: EPO

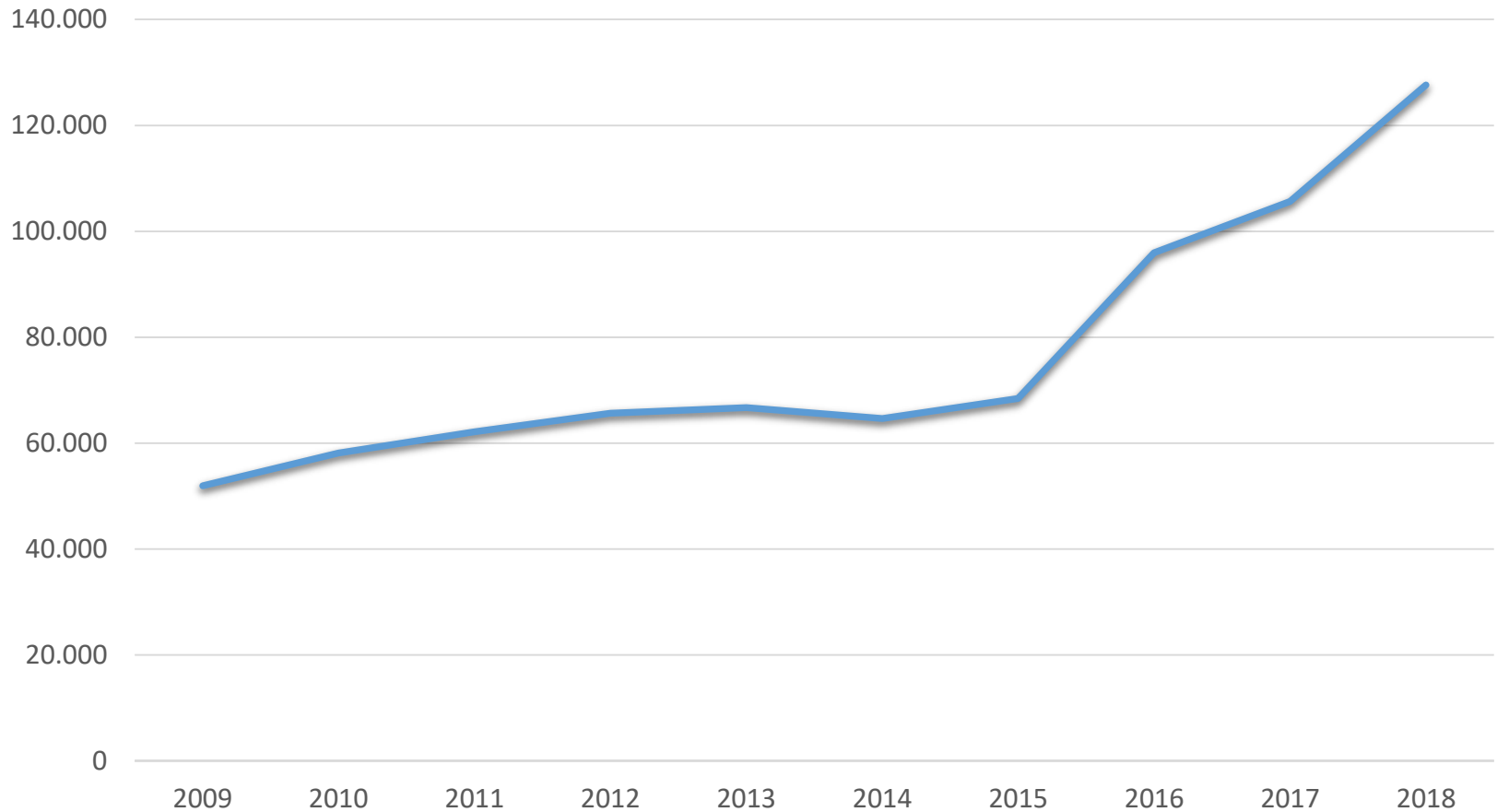# Duration of examination

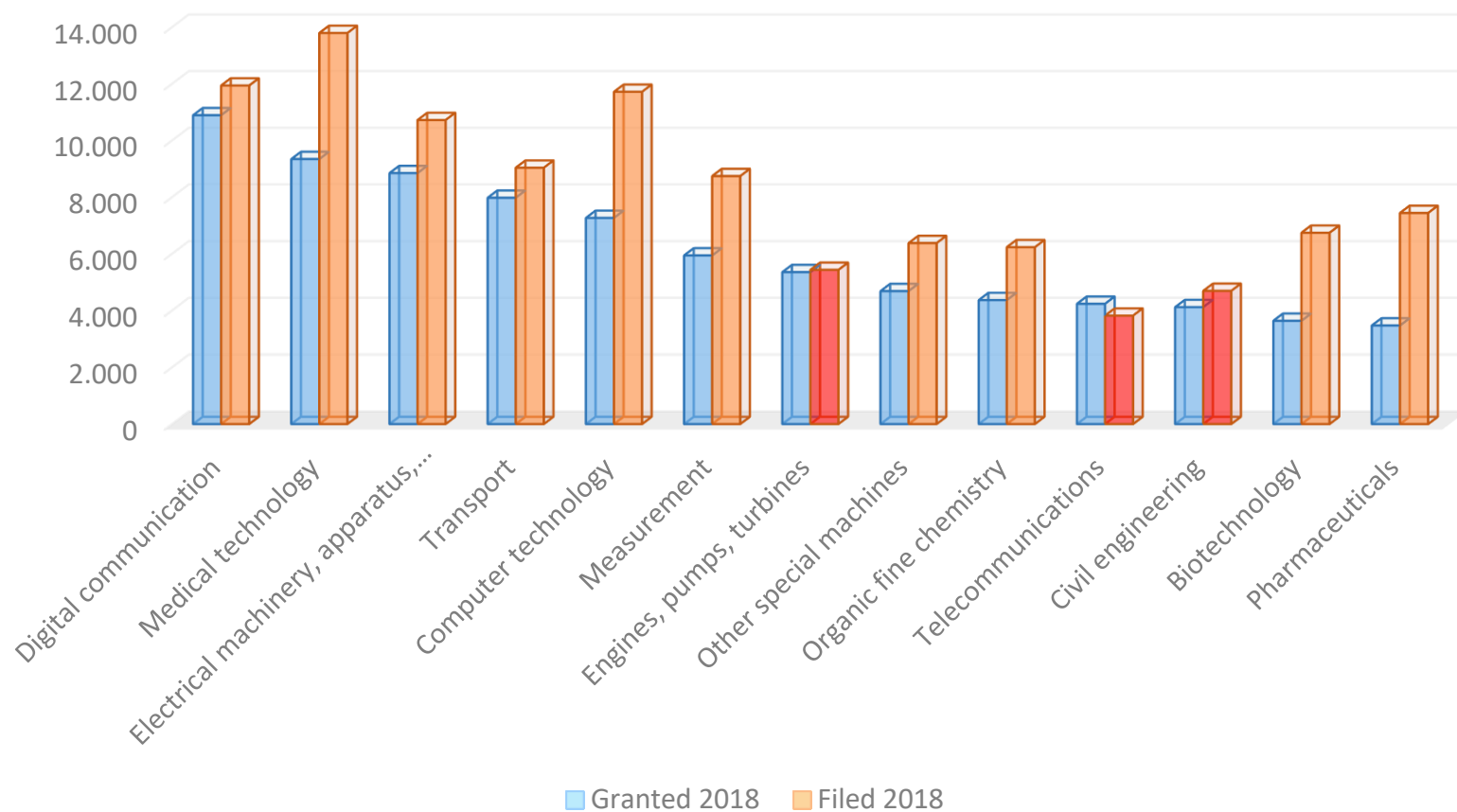Source: EPO

Changes: examiners & applications

Source: EPO

Total grant rate – EP patents

Source: EPO

Grant vs. filed by tech field - 2018

Source: EPO

Trends and paradigms

4th Industrial Revolution - trends

Industrial Revolutions

- 1IR – Steam power – 18th C

- 2IR – Electricity – 19th C

- 3IR – Digital age – 20th C

- 4IR – Across fields – 21st C
    - 3D printing
    - Autonomous/self-driving vehicles (SDV)
    - Blockchain
    - AI

4IR filings

Over last decade:

- Some increase in fundamental AI

- Factor 10x – AI <u>technical applications</u>

- SDV:
  - 2011 - 900
  - 2017 – 4000
  - Applicant mix
    - traditional auto (vehicle handling, smart logistics)
    - Information and Communications Technology (ICT)CT + telecom (communication)

How to search?

- Multiple databases
  - Patent and non patent documents
  - Variety of Asian languages
  - Machine translate from multiple languages
  - Dedicated search tools
  - CPC classification system
  - Beware!!! WWW, blogs, conference info (publication date?)

How to examine?

- Blockchain, AI… Computer Implemented Inventions
- 1. Eligibility – claim as a whole have technical character?
  - Can include non-technical features and technical features e.g.:
  - Nature of data?
  - Computer implemented method?
- 2. Patentability, assessing inventive step solely by technical features

"Skilled person"

Art. 56 EPC – inventive step:

- *An invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art.*

Art. 83 EPC – disclosure:

- *The European patent application shall disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.*

Thank you for your attention!

Nicolas Jones

nicjones@mskpatents.com