Great wall of Chinese IP information
Outline

- Picturing the current Chinese IP landscape
- Analysing the factors behind the “Chinese IP explosion”
- Understanding the bigger picture – past and present
- Tackling the challenges – using available sources (wisely)
- Staying up-to-date
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Evolution of Chinese patent applications

- **since 2003:** mode domestic than foreign patent applications
- **2011:** 526 000 invention patent applications - China overtook USA (503 582) and is now worldwide no.1
- **2016:** 1.3 million patent applications filed in China – more than in all other IP5 patent offices together

Source: annual reports
Evolution of Chinese utility models

particularly high number of utility model filings, especially by local applicants (cheap, fast, only formal examination) - most will not have any EN family members!

Source: annual reports

[Graph showing the evolution of Chinese utility models from 2007 to 2017, with the number of filings increasing each year. The graph includes columns for domestic, foreign, and total utility model filings.]
2017: Chinese trade mark applications cumulatively reached 27.842 million applications / 17.301 million registrations, ranking worldwide number 1 for consecutively 17 years!
European patent applications by Chinese applicants (2017)

China = country of residence of first named applicant

Chinese applicants (Huawei, Alibaba, Xiaomi, ZTE) especially strong in “computer technology” and “digital communication”
Picturing the current Chinese IP landscape

- huge global players located in China (Huawei, ZTE, Xiaomi, Alibaba)
- smaller local companies with active filing (especially utility models)
- huge repository of prior art (no EN family members; utility models!)
- ever-increasing national and international filing activity
- particular language challenge (despite improved machine translation tools)
- strong focus on “new technologies” like AI
- unique “political factor” (IP as tool for national innovation)
- ongoing changes in administration, IP laws, structures...
- issues with IP protection and enforcement

→ difficult to keep track of developments!
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Analysing the Chinese “IP explosion”: Government role

- various studies try to explain surge of Chinese IP applications/registrations
- most frequently mentioned: political structure and government’s role
- 13th Five-Year Plan period (2016-2020):
  - contains national plan on IP protection/application
  - planned number of 12 patents per 10,000 people, 2.2 million registered rights nationwide, public’s satisfaction degree with IP protection of 80%, doubled amount of PCT patent applications (from 30,000 to 60,000)
- policy measures to encourage innovation behaviour
  - at national and provincial level; for applications and grants
  - reductions of patent fees (last time: 1 August 2018)
Analysing the Chinese “IP explosion”: Other factors

- improved innovation capacity
- local companies actively build up large IP portfolios
- privatisation of state-owned enterprises (more inclined to protect own IP)
- foreign direct investment and R&D input correlate with rise in applications
- improved protection due to evolving IP system / law revisions (greater readiness to file applications)
- foreign-trained Chinese return with patenting behaviour acquired abroad (“reverse brain drain”)
- low-priced patent agent services available
Studies on China’s innovation capacity

*US National Science Foundation data (2018)*

- China: 2nd largest spender on R&D after United States; 21% of world’s total
- R&D growing on average by 20% / year since 1999
- rapid growth means China likely to take lead within next 5-10 years

- more students graduate with science / engineering degrees than anywhere
- 2018: China overtook US in terms of amount of scientific publications
- Western scientists are citing growing number of Chinese publications

Studies on China’s innovation capacity

WIPO’s annual *Global Innovation Index* (2018):

- China for the first time among top 20 of world’s most innovative countries
- 80 indicators (patent applications, app developments for smartphones, scientific publications, education funding etc.)
- innovation quality: China leads in top 10 middle-income economies

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Development stages of Chinese IP system

- China updates IP system and legal framework in line with level of national science & technology development and needs

- late 1970s: “Reform and Opening Up” Policy
  - import of foreign technologies/whole-set equipment, construction of plants, special economic zones
  - attracting foreign investment → preferential policies for foreign companies
  - early patent law necessary as basis for technology imports

- 1985: first Chinese patent law in force / accession to Paris Convention
Development stages of Chinese IP system

- 1990s: Government plans for scientific/technical development
  - intensive reforms of higher education
  - transformation of public research institutions to enterprises
  - encouragement of investments

  - extension of duration: patents 15 → 20 years, utility models 5 → 10 years
  - protection for chemical/pharmaceutical/food products
  - domestic priorities introduced
  - pre-grant opposition abolished
Development stages of Chinese IP system

- 1996: start of negotiations to join WTO (entry in 2001)
  - national needs (transition from planned to market economy)
  - external pressure (foreign investors/governments requiring protection)

- 2000/1: second revision of patent law
  - in light of WTO accession → alignment with TRIPS
  - strengthening patent owner's rights against infringement
  - post-grant revocation abolished (only invalidation possible)
Development stages of Chinese IP system

- After WTO entry (2001):
  - measures to boost domestic filing
  - subvention/bonus system, further encouraging invention patent filings
  - tax credits for R&D expenditure in high-tech sector etc.

- 2009/10: third revision
  - strengthen protection, encourage innovation
  - further harmonise patent law with international treaties
  - major changes: absolute novelty standard, dual filing of patents and utility models, confidentiality examination
  - → domestic and international stakeholders involved
Development stages of Chinese IP system

- Strategic IP framework (since 2008); related to 3rd law revision
- China is strategically creating a national innovation system
  - orientation towards emerging industries
  - focus on science/technology for further development
  - IP as tool to support development and contribute to innovation system
  - specialised IP Courts since 2014 to enhance implementation of rights

- various strategy papers issued
  - *Outline of the National Intellectual Property Strategy (2008)*
Development stages of Chinese IP system

- 4\textsuperscript{th} revision of patent law (ongoing)
  - first draft (08/2012), second draft (12/2015)
  - aims: strengthen patent protection and improve quality
  - effectiveness of enforcement; facilitate patent utilisation and technology transfer; clarify government’s role in enforcement, service provision and facilitating of patent utilisation; improve patent agency services and development of IP service sector
- expected to enter into force in late 2018/early 2019
- plans to set up national-level IP Appellate Tribunal with the Supreme People’s Court (unify practice of IP cases across all Chinese courts)
Development stages of Chinese IP system - summary

- **1st/2nd patent law amendments** (1992/2001)
  - benefit economic development/establish market economy
  - harmonise patent law internationally
  - concession to foreign investors
- **3rd law amendment** (2008)
  - after WTO entry (IP legislation activities no longer purely domestic affair)
  - reform of economic model rather than (only) fostering development
- **4th law amendment** (ongoing)
  - focus on market demand, build service-oriented government
  - improving protection and promoting utilisation of patents
  - strong domestic interest in IP registration / protection
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Recent government restructuring - Background

- restructuring plan for various institutions submitted by State Council during 13th National People’s Congress in March 2018
- largest government restructure in China since late 1970s
- modernise governance structure for more efficiency and service orientation
  - reduce ministries and agencies, eliminate duplication of responsibilities, improve intra-government collaboration
  - strengthen market supervision, social management, public service and environmental protection
Recent government restructuring – IP authorities

- harmonise management/enforcement of patents and trade marks by supervision of single agency
  - institutional foundation to foster building of an “IPR powerful country”
  - strengthen creation, protection and utilisation of IP
  - advance construction of IPR review bodies

- possible effects
  → streamlining of IP grant/registration procedures
  → shorter examination periods (increased efficiency)
Recent government restructuring – IP authorities

- State Intellectual Property Office (SIPO) re-named to China National Intellectual Property Administration (CNIPA) in August 2018
- new URLs: www.cnipa.gov.cn and english.cnipa.gov.cn
- supervised by newly-established State Administration for Market Regulation
  - combines responsibilities of former State Administration for Industry and Commerce (SAIC), General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) and Food and Drug Administration
  - key regulator in supervising market order (business registration, market regulation, product and food safety, quality inspection etc.)
  - trade marks and geographical indications handled by CNIPA
Recent government restructuring

Previous structure

State Council

State Intellectual Property Office (SIPO)

- Patent* registration
- Patent enforcement

State Administration for Industry and Commerce (SAIC)

- Trade mark registration
- Trade mark enforcement

New structure (since March 2018)

State Council

State Administration for Market Regulation (SAMR)

- National Intellectual Property Administration (CNIPA)

- Enforcement units

- Patent* registration
- Trade mark registration
- GI registration

*“patent” covers invention patents, utility models and designs
Belt and Road Initiative (BRI) - Background

- Silk Road Economic Belt and 21st-Century Maritime Silk Road
  (“One belt-one road” – OBOR or “Belt and Road Initiative - BRI”)
- launched in 2013, enshrined into constitution since October 2017
- initiative to create network of railways, roads, pipelines etc.
- 70 countries / approx. 65% of world’s population / scope constantly expanding
- investment of USD 900 billion/year in infrastructure construction
- attempt to have stronger voice in global economic order
- rebalancing gaps in existing global governance structure
- domestically: spur economic growth of less-developed border regions / balance regional disparities
Belt and Road Initiative (BRI) - Background

- “Belt” links China to Central and South Asia and on to Europe
- “Road” links China to South East Asia, Gulf Countries, North Africa, and on to Europe

Source: China Daily / English website of State Council of the PRC at http://english.gov.cn
Belt and Road Initiative (BRI) - Background

- “hard” connectivity (infrastructure, transport)
- “soft” connectivity (promotion of trade, financial integration, exchange of policy and culture)
- boost economic stability in BRI area and beyond, improve infrastructure development – new channels of trade and development (potential markets)
- stimulate trade by lowering trade barriers and costs, facilitating flow of information, goods and people
BRI Intellectual Property Initiatives 2016/2017

- High Level Conferences on IP involving countries along “Belt and Road”
- common initiatives and cooperation measures, defining general framework for IP co-operation
- CNIPA held training workshops for developing countries, invited officials from regional organisations (e.g. ARIPO, OAPI, ASEAN secretariat, GCC, Eurasian Patent Office and countries such as Serbia, Ukraine, Morocco, South Africa, Brazil, Argentina etc.)
- 2017: Chinese applications in BRI countries increased by 16%
Made in China 2025 - Background

- national strategy since May 2015
- comprehensively upgrade industry and make China leading global manufacturer by 2025 (2049)
- transition to high-tech goods and advanced manufacturing

- role of state: provide framework, utilise financial / fiscal tools, support creation of manufacturing innovation centers, strengthen IP rights protection for SMEs, more effective use IP in business strategy, allow companies to declare own technology standards and participate in international standard setting
Made in China 2025 – Background

- nine strategic tasks, including:
  - encourage innovation and the use of digital technology in manufacturing
  - improve the quality and efficiency of manufacturing
  - enforce green manufacturing methods
  - globalise Chinese brands
  - improve service-oriented manufacturing and manufacturing-service industries
Made in China 2025 - Background

- 10 priority sectors:

1. New advanced information technology;
2. Automated machine tools & robotics;
3. Aerospace and aeronautical equipment;
4. Maritime equipment and high-tech shipping;
5. Modern rail transport equipment;
6. New-energy vehicles and equipment;
7. Power equipment;
8. Agricultural equipment;
9. New materials;
10. Biopharma and advanced medical products
Made in China 2025 – Plans for IPR

- strengthen IPR reserves in major manufacturing areas, build industrialisation-oriented **patent pools** strategically
- encourage and **support enterprises to compete with IPR**, cultivate enterprises with globally competitive IPR, form IPR coalitions to promote collaborative use of IPR among domestic enterprises
- steadily promote decryption and marketisation of **national security IPR**
- establish and improve **IPR review mechanism**
- encourage and support key enterprises and professional institutions to co-operate in major areas on **patent evaluation**, acquisition, operation, risk assessment and risk response
- build **public service platform** to support use of IPR
- encourage **multinational IPR licensing** and formulate policies to lower cost for SMEs to apply for and protect IPR

Source: Made in China 2025 – official document
BRI and MiC2025 – Possible implications for IP

- continued growth and increased quality of Chinese applications domestic and abroad (especially in “priority sectors”)
- increased filings along the BRI routes (e.g. India, Singapore, Vietnam, Russia, Turkey, ...)
- increased applications by companies from BRI countries in China
- (worldwide) rise of popularity of Chinese brands
  → monitor IP applications in China and in BRI (key) countries
  → watch developments in “priority sectors”
  → seek advice on protection of own IP along the Belt and Road
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## Sources of Chinese patent information

<table>
<thead>
<tr>
<th>Data availability</th>
<th>~ 10-15 years ago</th>
<th>2018</th>
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<tbody>
<tr>
<td>Update of EN interface (CNIPA source)</td>
<td>Quarterly, time lag unknown</td>
<td>Tue, Fri; one week delay</td>
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<tr>
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<td>Full text data</td>
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<td>Online machine translation</td>
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<td>CNIPA, PatentTranslate &amp; others</td>
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<td>English legal status</td>
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<td>EPO Espacenet</td>
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<td>Extended information</td>
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<td>Fee payment information</td>
<td>In Chinese</td>
<td>In English, from 1985 onwards</td>
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<td>Online file inspection</td>
<td>n/a</td>
<td>CNIPA, Global Dossier (bilingual)</td>
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<td>Cited documents</td>
<td>n/a</td>
<td>CNIPA, Espacenet</td>
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<td>Invalidation/Re-examination decisions</td>
<td>n/a</td>
<td>In Chinese</td>
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</table>
Search tools back then....
... and now...
... and in the future?

- even better tools with AI support?
- joint databases for several jurisdictions, e.g. along “Belt and Road”?
- combined sources for searching various types of IP together?
- ....?

- great potential with new initiatives and technologies!
- staying up-to-date is key!
Tips for using Chinese databases

- Chinese patent information can be retrieved via EPO’s Espacenet
- further details available in CNIPA’s official sources (partially on Chinese interfaces), e.g. most recent data, machine translations of granted patents, design information, fee payment data, legal judgments etc.
- risk of overlooking relevant information, if only English language interfaces are used!
- combine different databases to minimise gaps in information!
- use EPO’s step-by-step search guides on how to locate this information
Tips for using Chinese databases

free step-by-step guides for searching Chinese sources

www.epo.org/asia
Tips for using Chinese databases (and more)

regular webinars offered by EPO; tailor-made training courses available!
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Staying up-to-date: EPO publications

https://www.epo.org/service-support/publications.html#tab2

China: SIPO has been renamed to CNIPA

Following a recent restructuring, the former State Intellectual Property Office of China (SIPO) was renamed to China National Intellectual Property Administration (CNIPA) on 1 August 2018. The official website is now www.cnipa.gov.cn (in Chinese version) and equivalent versions are provided in the English version, while the previous SIPO site will still be accessible for a transitional period, but users are advised to switch to the new one.

https://www.epo.org/searching-for-patents/helpful-resources/asian/asia-updates.html
Staying up-to-date: Official websites

- **Official government websites**
  - State Council of the PRC: http://english.gov.cn/
  - Belt and Road Portal: https://eng.yidaiyilu.gov.cn/

- **Official IPR-related websites**
  - CNIPA English website: http://english.cnipa.gov.cn/
  - China IPR News: http://www.chinaipr.gov.cn/
Staying up-to-date: Useful resources

- Global Innovation Index: [www.globalinnovationindex.org/home](www.globalinnovationindex.org/home)

- EPO’s Asian Patent Information Services: [www.epo.org/asia](www.epo.org/asia)

- Mercator Institute for China Studies: [https://www.merics.org/en](https://www.merics.org/en)
EPO Vienna –
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