Platforms and platformisation
An intangible resources perspective
Implications for innovation

(work in progress)

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Safe and Ethical Cyberspace, digital assets and risks:
How to assess the intangible impacts of a growing phenomenon?

The World Conference on Intellectual Capital for Communities

UNESCO, June 14&15 2018

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iC 14
Intellectual Capital for Communities In the Knowledge Economy

Agenda

1. The Context and challenging issues
2. Analytical approaches
3. Typology of platforms
4. Towards an integrative approach
5. The scope of the research
6. The geography of the studied platform
7. Interim Conclusion

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1 – The Context and challenging issues

Platforms as a mode of organising raises several issues

- From the **Business side** :
  Competitive conditions, relations to customers, suppliers, complementors and ecosystems

- From the **policy side**:
  The competition policy
  The innovation policy
  The society as a whole

1 – The Context and challenging issues

- **Platorms responsibilities issues** (OECD, 2017)
- consumer protection and privacy issues
- Consumer trust in peer platforms
- Consumer product safety
- Consent to collect and use personal data
- -----etc.

1 – The Context and challenging issues

Economic benefits

- Inscreasing the potential for innovation
- Increasing productivity and international trade
- Increasing access to resources for business (logistical platforms)

Social benefits

- More information
- Engaging better with public authorities and the society

1 – The Context and challenging issues

Risks of platforms

- Market dominance leading to less innovative suppliers
- Platforms advertising their own products
- Control of the society and challenges for the Hobbesian sphere (the Government as a « peace keeper »)

2- Analytical approaches

- A platform : an umbrella concept
- Different arguments put by the literature for considering platforms as markets or as an organisational design for resources (Martens, 2016, EC, 2016, Ceccagnoli et al 2001, Linder et al. 2003, Gwaer and Cusumano, 2002)
- A platform can be defined as

« a space for bundling the firm's ecosystem's resources for innovation, those of the heterogeneous, users, as well as those of suppliers, partners and complementors »

2- Analytical approaches

1. The Engineering approach (1/2)

- The seminal work by Wheelright and Clark (1992) on product development planning and execution, as they refer to « product platform »
- This first wave has been followed by the technology strategists who studied major ICT platforms such as CISCO, INTEL, or Windows (Bresnahan and Greenstein, 1999, Gawer and Cusumano, 2002)

2- Analytical approaches

1. The Engineering approach (2/2)

- The platform as basically a set of common elements to be used in the modular architecture, with stable components and periphery » (Wheelright and Clark, 1992).

2- Analytical approaches

2. The Industrial economics approach (1/2)

- The multi-sided markets (Rochet , Tirole, 2004)
- Proposed that multisided platforms can be characterised by two factors :
  - « they enable direct interactions between two or more distinct sides;Each side is affiliated with the plaform » (Hagiu and Wright, 2015)
  - emphasis put on the networked effects between users (consumers) and suppliers is critical in understanding platform as « transaction spaces »

2- Analytical approaches

2. The Industrial economics approach (2/2)

- The two sided market and the pricing mechanism for the two sides

Two issues here:

- Incentive to innovate : platform might not be in a position to innovate because of the limited resources of suppliers, the disequilibrium between the two sided markets, or the dominance position
- Platforms as substitute for public services

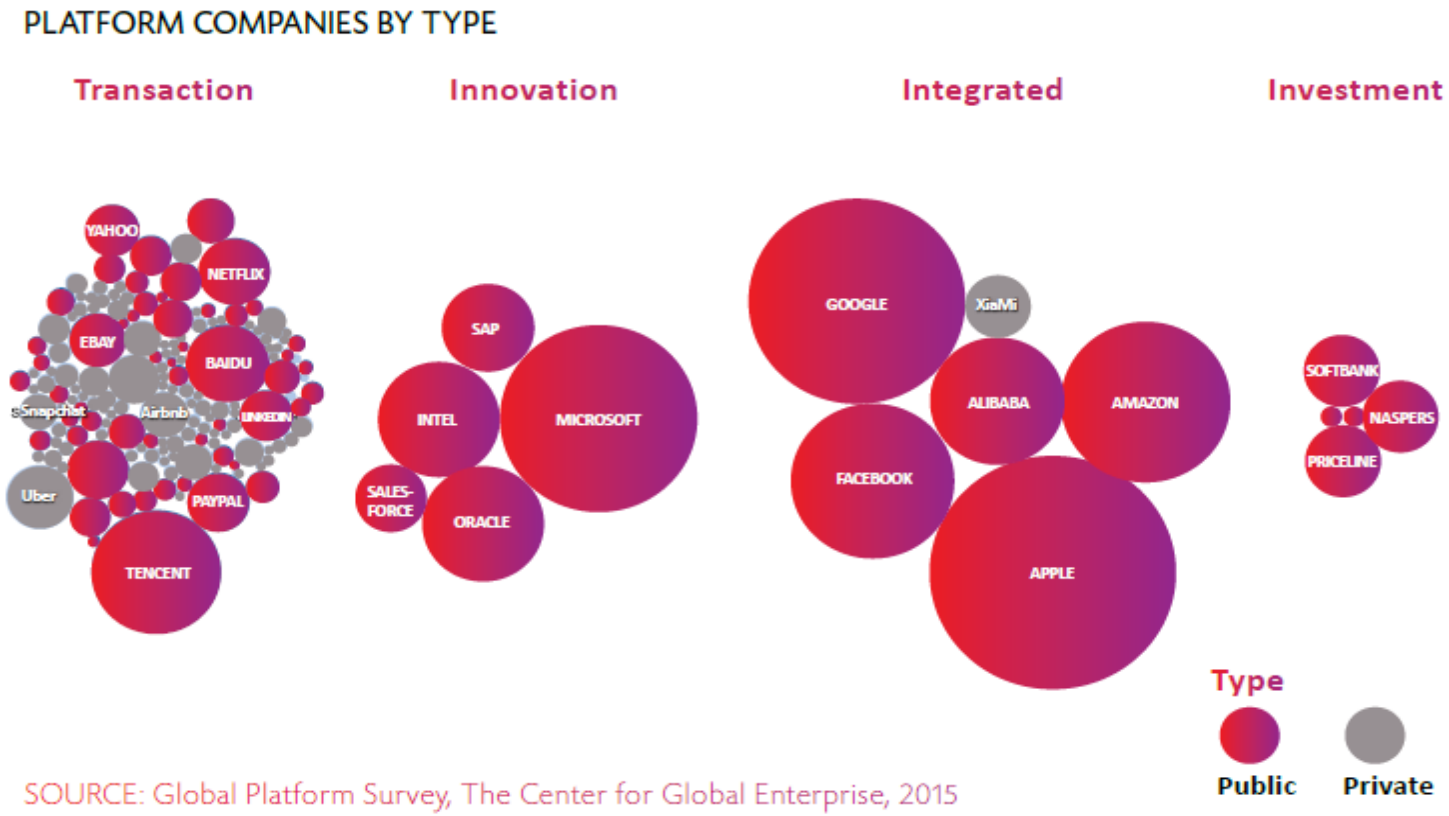
2- Analytical approaches

3. **Platforms as a set of strategic choices**

- The issue of openess versus control
- Platform as a leverage for ecosystemic resources
- The interest for small firms to join

3. Typology of platforms

- Transaction, Innovation, Integrated, Investment (Gawer, 2016)



3. Typology of platforms

	Production	Intermediation	Exchange
BtoB	Internal Platforms, Slack, AWS	Payment Cards	Financial exchanges
B2C	AWS, software OS, game consoles	Ad-funded media, phone networks, Zoopla, travel booking	Ebay, Amazon Marketplace
P2P	Sharing economy work platforms (Thumbtack, Taskrabbit)	Social media, UberX	Sharing pltaforms eg UberPool, Airbnb, Home sways,

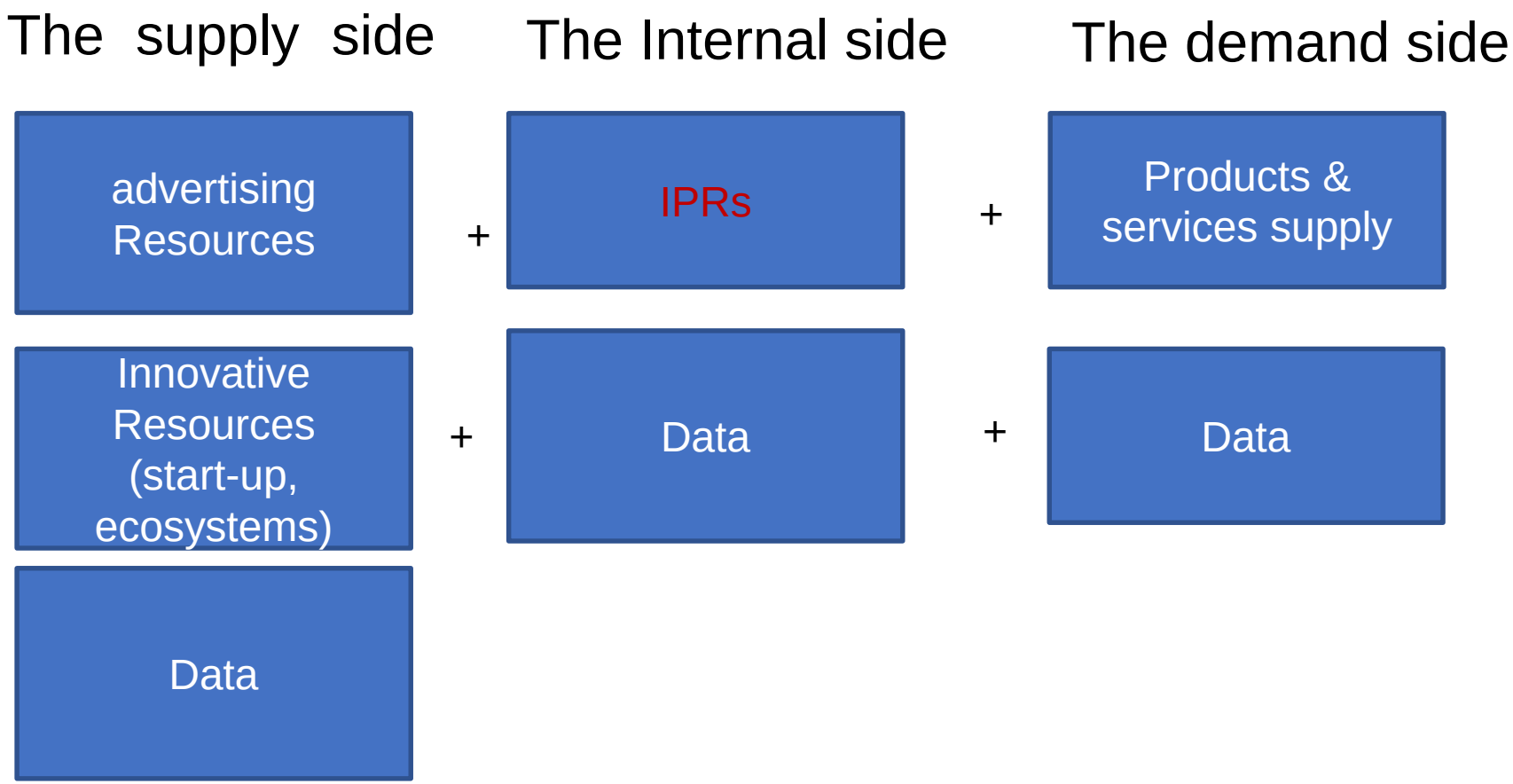
Source: Coyle (2017)

4. Towards an integrative approach
The issue of control of intangible resources

How do platforms contribute to innovation ?

- Analysing products/services and services variety
- Investment- and control- of critical resources
- The platform organisational design
- The internalisation of ecosystemic innovation

4. Towards an integrative approach
The issue of control of intangible resources



5- The scope of the research

1. Delineating the platforms practices for innovation
2. Assessment of level of resources mobilised and the impact on market structures for innovation

- Questions related to the demand side
- Questions related to the internal organisational side
  - Business models and governance
  - Access (control) of critical resources
- Questions related to the supply side

6- The geography of the studied platforms

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Plaform	Country of origin	Plaform	Country of origin
58.com	China	leshi	
Airbnb	US	Lianjia (home link)	
ALIBABA	CHINA	Line	japan
AliPay	CHINA	LINKEDIN	US
AMAZON	US	Lu.com	CHINA
ANT Financial		Lufax	CHINA
APPLE	US	lufax	
Atlassian	AUSTRALIA	M3.com	japan
BAIDU	CHINA	Meituan	CHINA
baidu	china	Meizu.com	CHINA
Beijing Feixiangren	CHINA	Mercari	japan
china internet plus hlds			mia.com
CJ Games	south kore	momo	
Colopl	japan	NASPERS	SOUTH AFRICA
Coupang	south kore	NAVER	SOUTH KOREA
Credit Karma	US	Naver	south kore
CTRIP.COM		naver	south korea
Delivery Hero	GERMANY	NETFLIX	US
Daex	France	Nintendo	japan
Dena	japan	Olacabs	INDIA
Dianpings	CHINA	olacabs	india
DIDI CHUXING		ORACLE	US
Didi Kuaidi	CHINA	PAYPAL	US
Dropbox	US	paytm	india
EBAY	US	Pinterest	US
FACEBOOK	US	PRICELINE	US
Fanatics	US	quikr	india

6- The geography of the studied platforms

Flipkart	INDIA	qunar	
GOOGLE	US	RAKUTEN	JAPAN
Gree	japan	rakuten	japan
hike	india	SALESFORCE	US
inmobi	india	SAP	GERMANY
INTEL	US	Shanghai Han Tao	CHINA
JD.COM	CHINA	shopclues	india
Kakaku.com	japan	sina corp	
Kakao	south kore	Snapchat	US
snapdeal	india		
Softban	japan		
soufun			
Spotify	SWEDEN		
Stripe	US		
TENCENT	CHINA		
tencent	china		
TWITTER	US		
UBER	US		
vancl			
vipshop			
WeWork	US		
XiaMi	CHINA		
YAHOO JAPAN	JAPAN		
YAHOO!	US		
Yello mobile	south kore		
yy inc.			
Zenefits	US		
zomato	india		
Zozotown.com	japan		

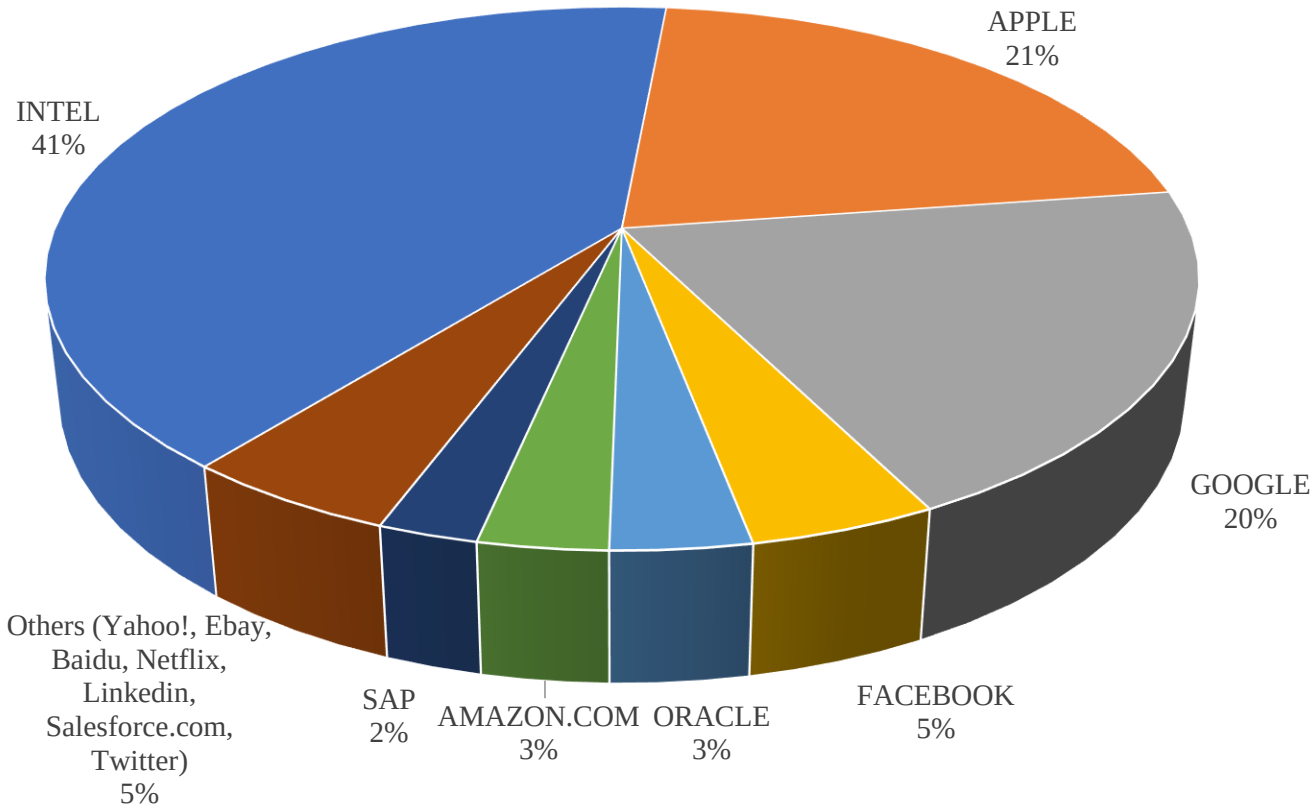
6- The geography of the to be studied platforms

6.1. **Quantitative analysis**

A focus on intangibles, especially IPRs:

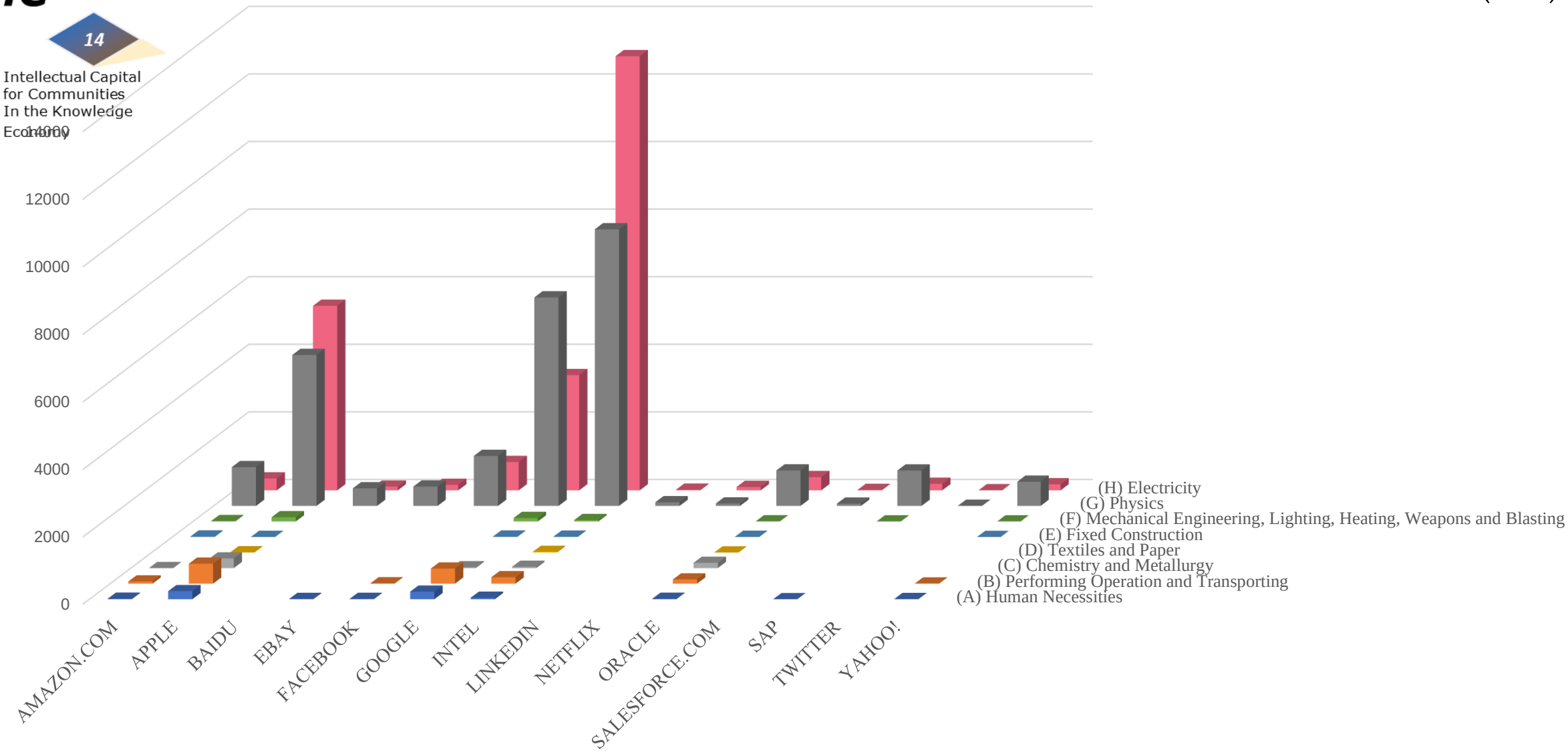
- The type of investment in IP by platforms, eg number and profiles of patents, brands and designs (using OECD IP data)
- The importance and type of acquisitions/ (participation in) of startups
- To the extent as possible, the rapprochement of strategic acquisitions with the type of innovative outputs observed in the market

Patents portfolio

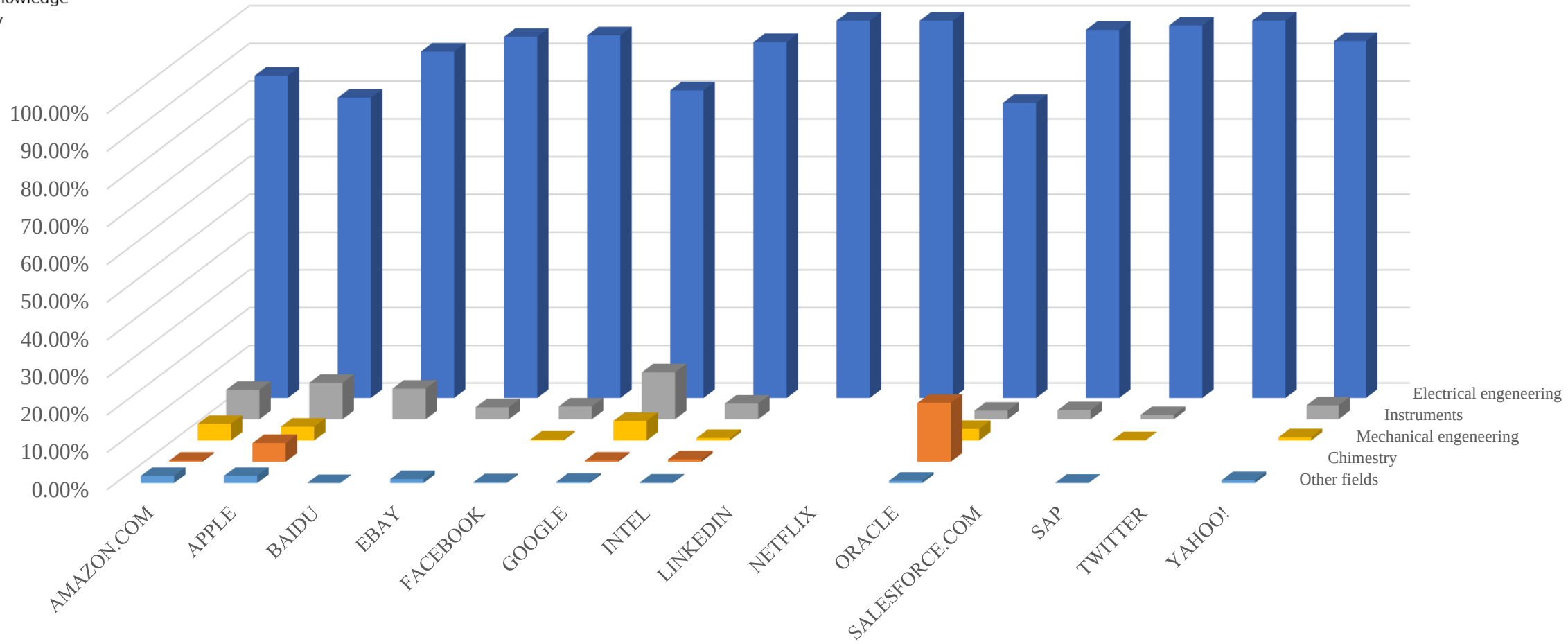


Total patents: **52.644**

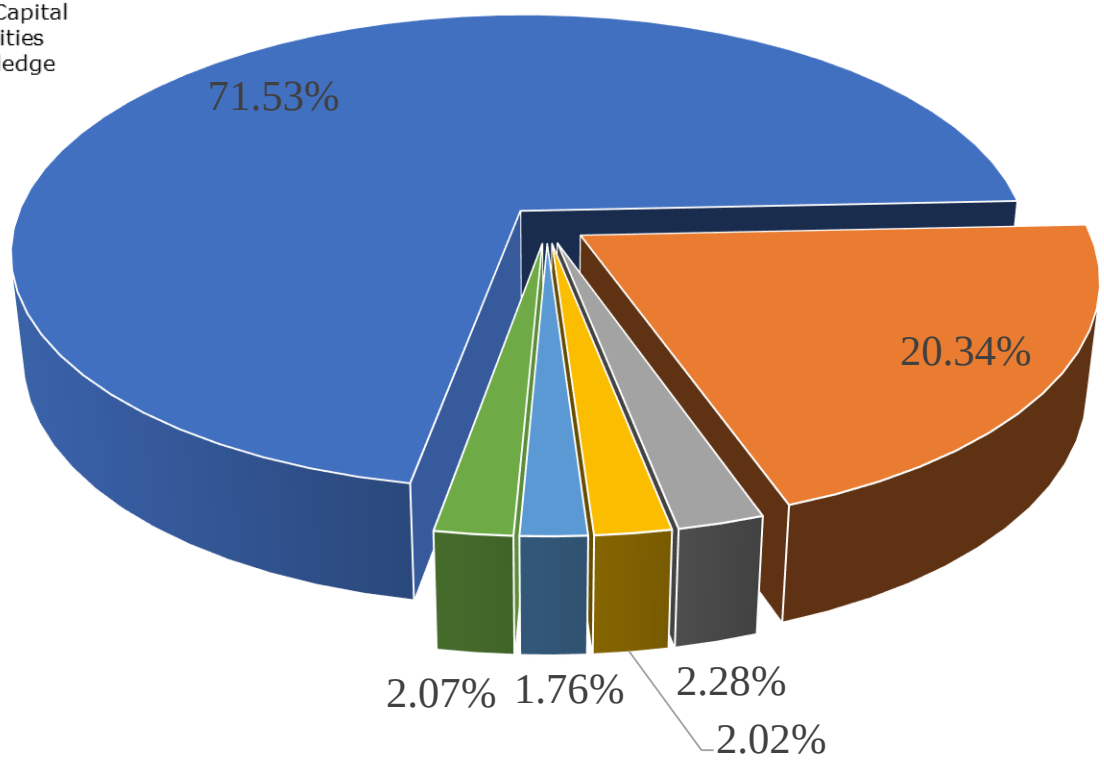
Patents classification (IPC)



Patents classification (WIPO)

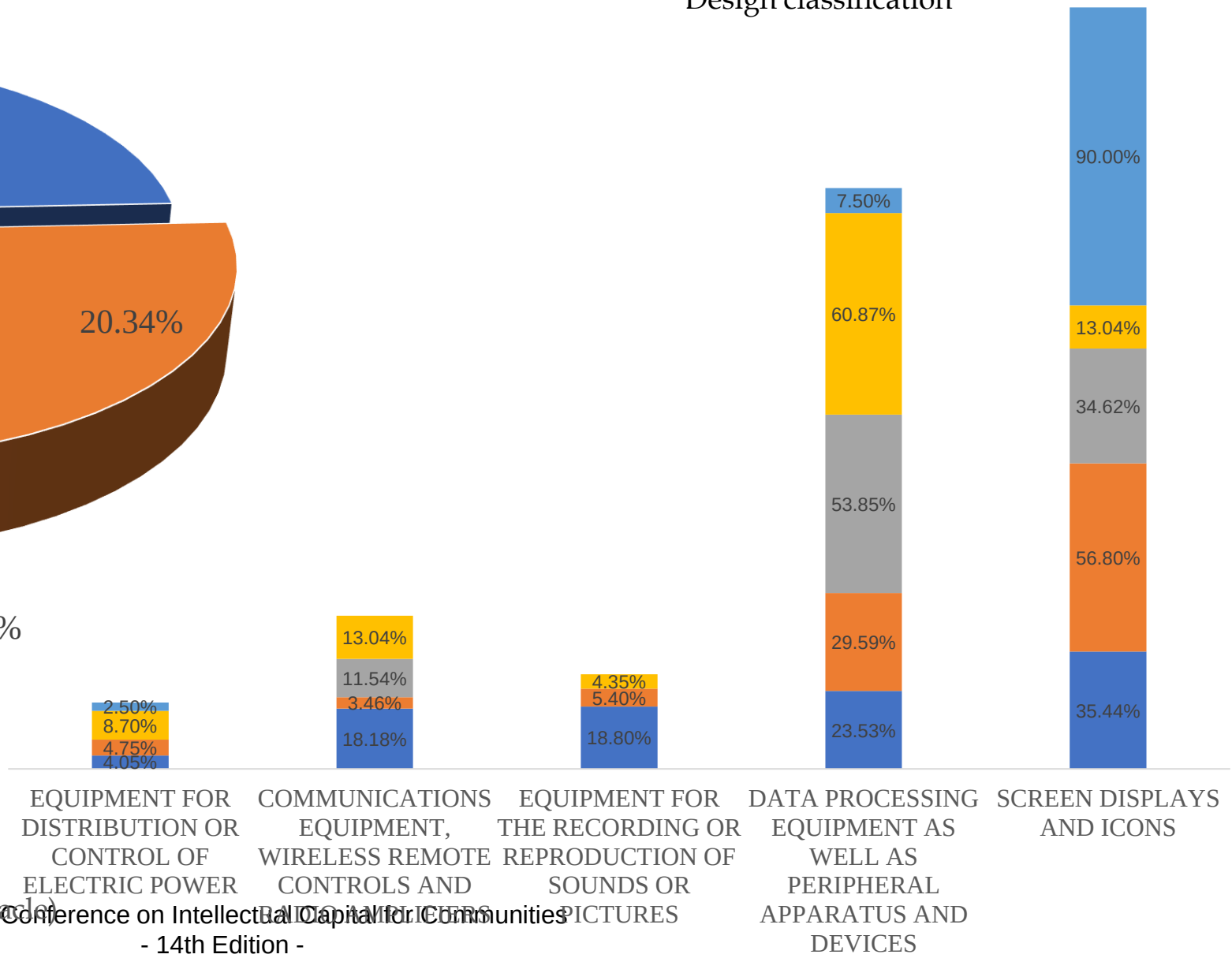


Design distribution



- APPLE
- GOOGLE
- INTEL
- AMAZON.COM
- FACEBOOK
- Others (Yahoo!, Ebay, Baidu, Salesforce.com, SAP, Oracle)

Design classification



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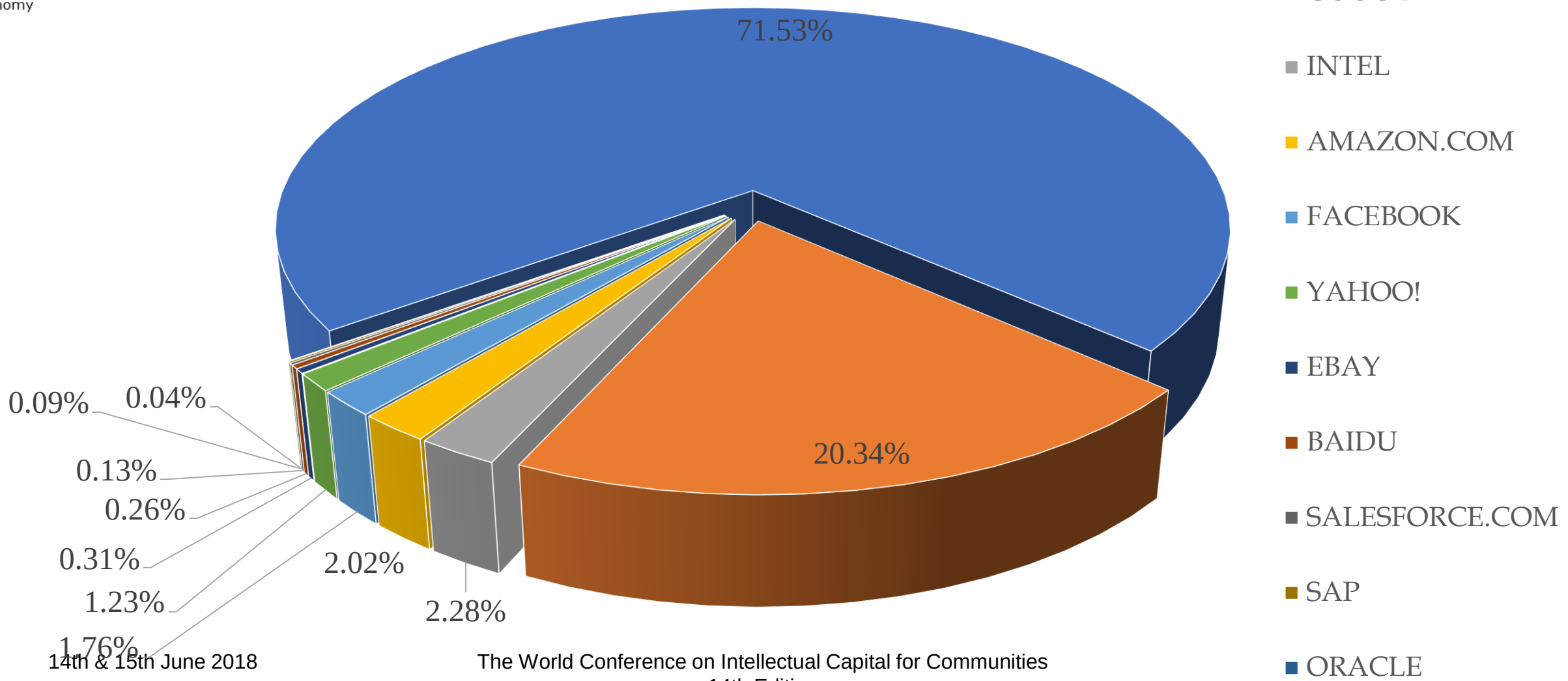

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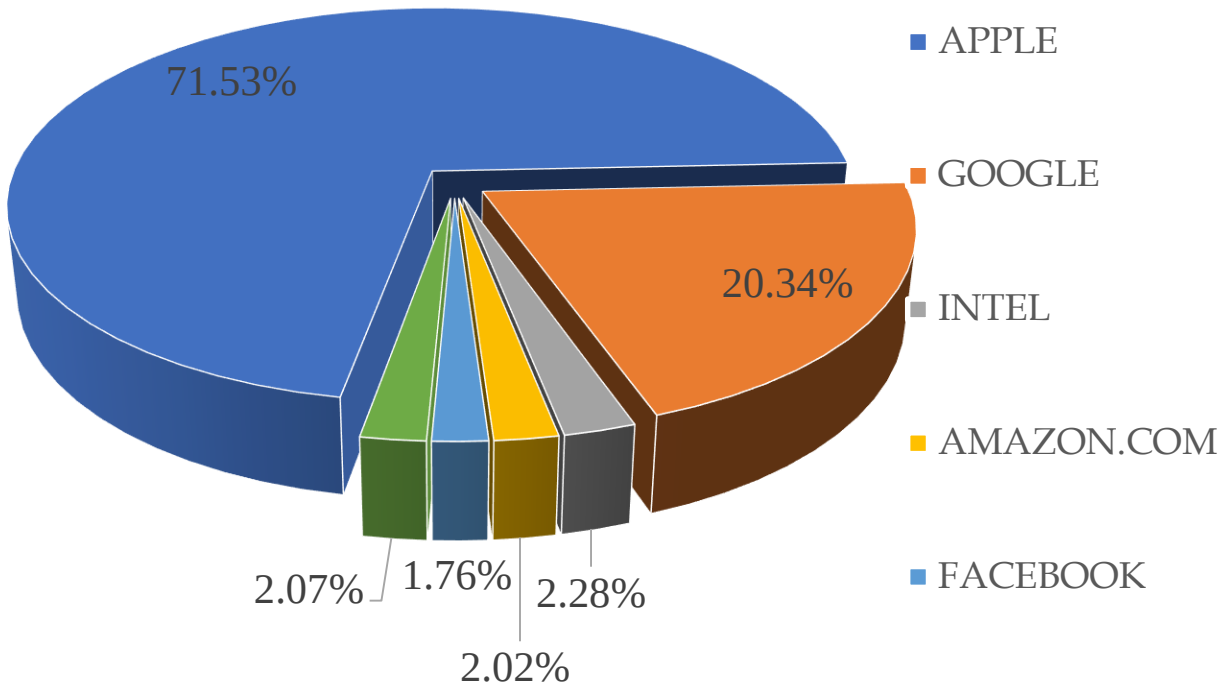
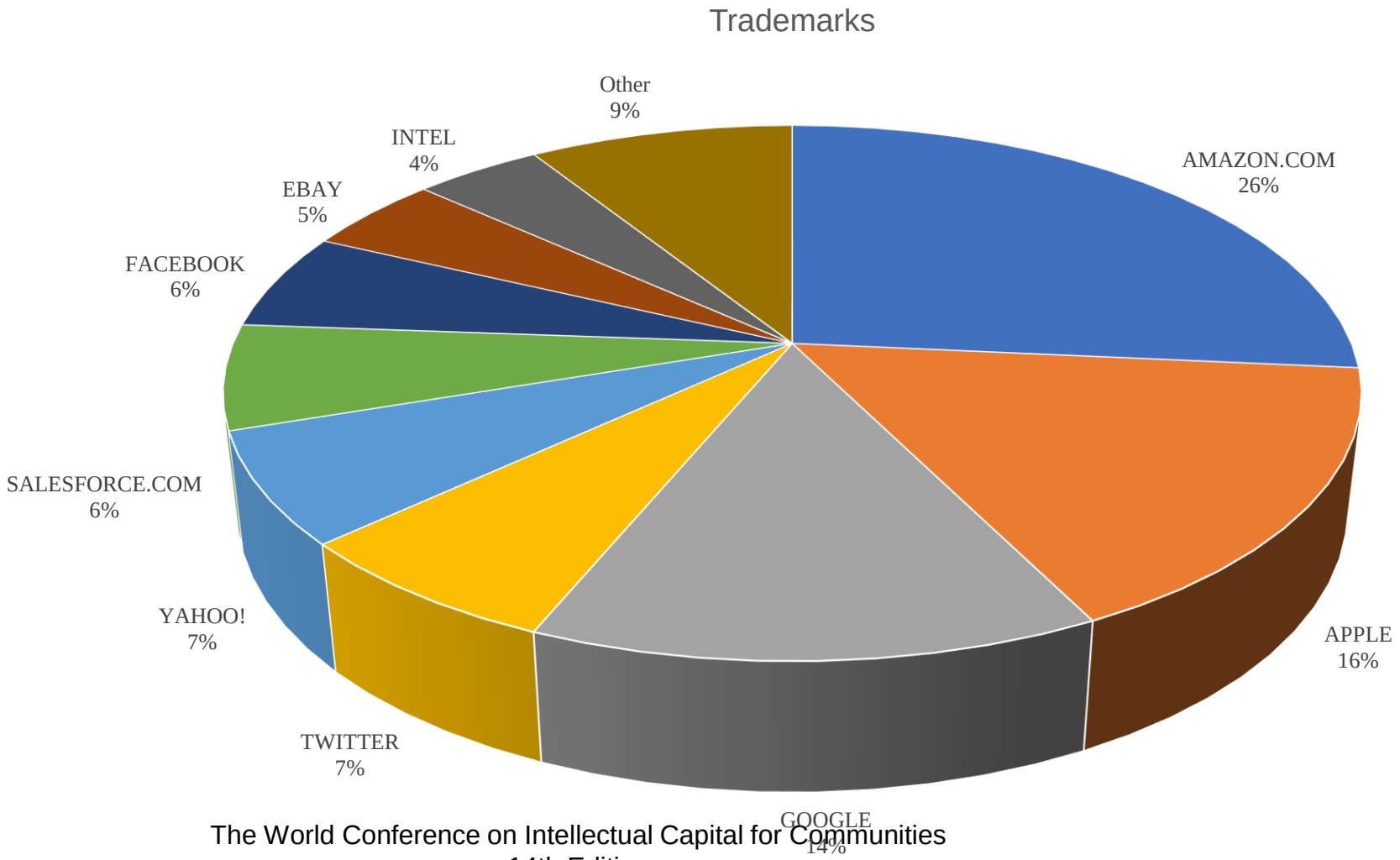


Trademarks


Trademarks
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INTEL
4%
EBAY
5%
FACEBOOK
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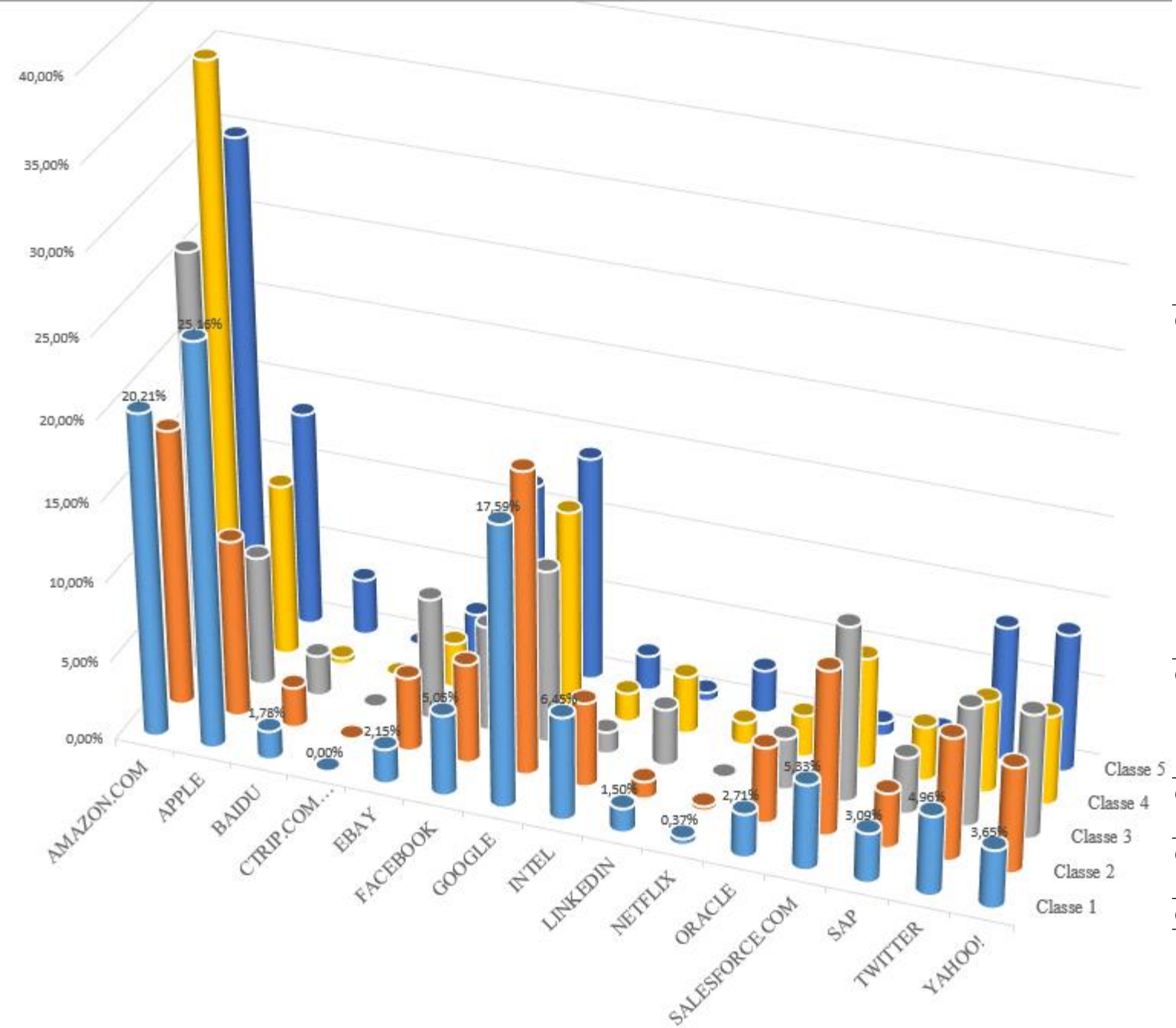
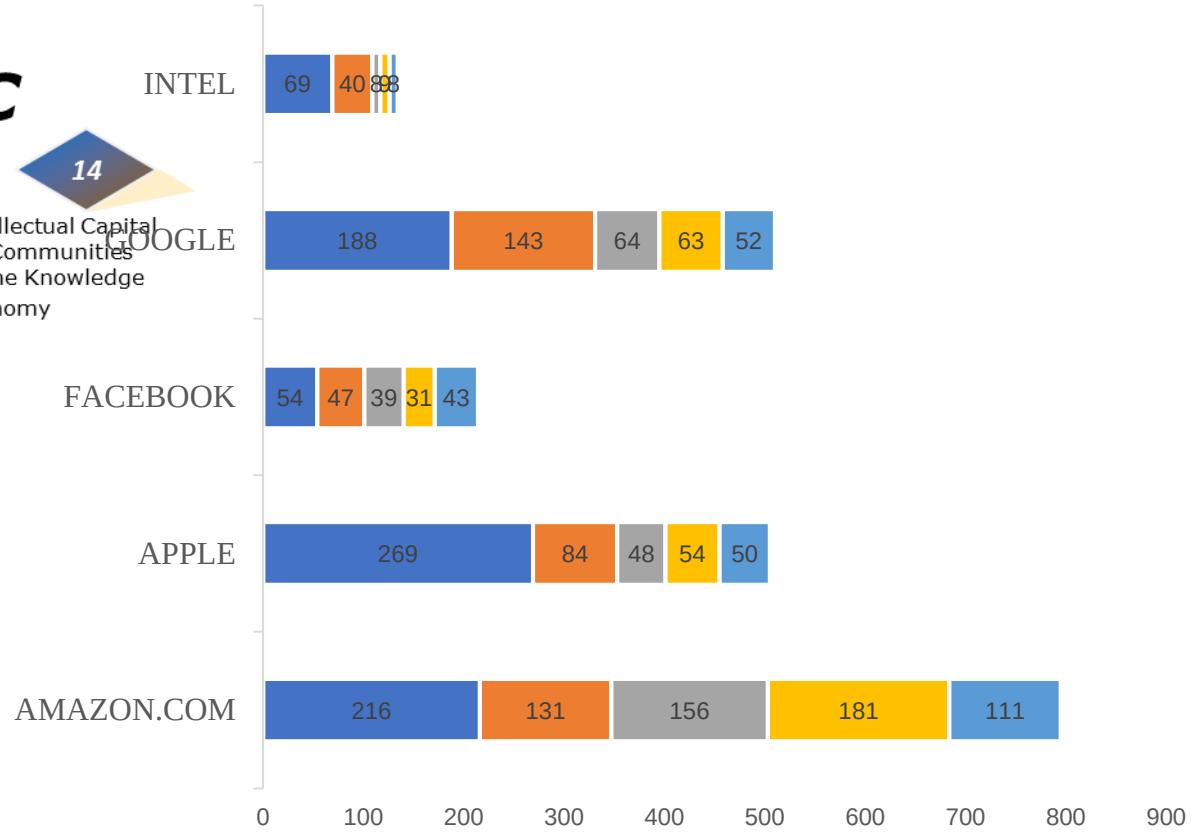


Trademarks

Classe 1	Scientific, nautical, surveying, photographic, cinematographic, optical, weighing, measuring, signalling, checking (supervision), life-saving and teaching apparatus and instruments, apparatus and instruments for conducting, switching, transforming, accumulating, regulating or controlling electricity, apparatus for recording, transmission or reproduction of sound or images, magnetic data carriers, recording discs, compact discs, DVDs and other digital recording media, mechanisms for coin-operated apparatus, cash registers, calculating machines, data processing equipment, computers, computer software, fire-extinguishing apparatus.
Classe 2	Scientific and technological services and research and design relating thereto, industrial analysis and research services, design and development of computer hardware and software.
Classe 3	Advertising, business management, business administration, office functions.
Classe 4	Education, providing of training, entertainment, sporting and cultural activities.
Classe 5	Telecommunications.

Trademarks



Classe 1	Scientific, nautical, surveying, photographic, cinematographic, optical, weighing, measuring, signalling, checking (supervision), life-saving and teaching apparatus and instruments, apparatus and instruments for conducting, switching, transforming, accumulating, regulating or controlling electricity, apparatus for recording, transmission or reproduction of sound or images, magnetic data carriers, recording discs, compact discs, DVDs and other digital recording media, mechanisms for coin-operated apparatus, cash registers, calculating machines, data processing equipment, computers, computer software, fire-extinguishing apparatus.
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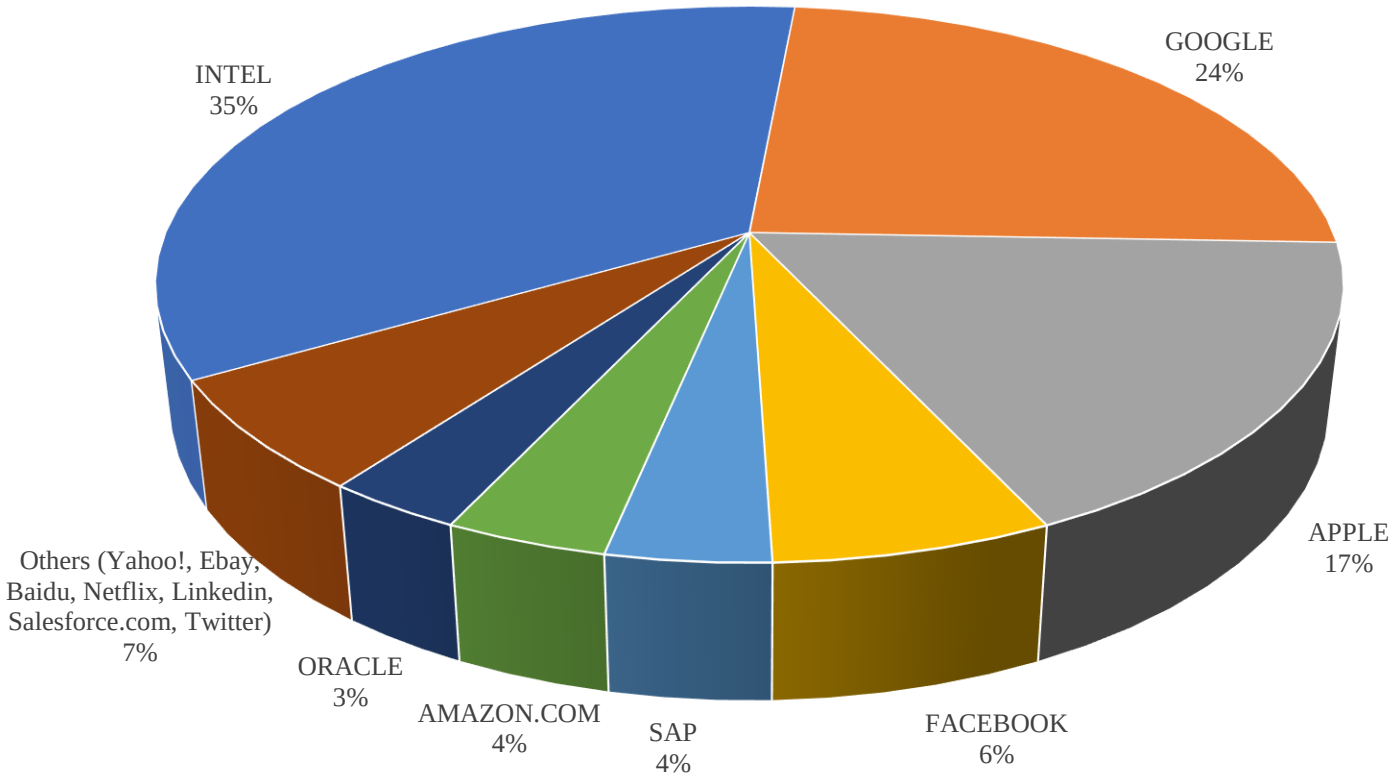
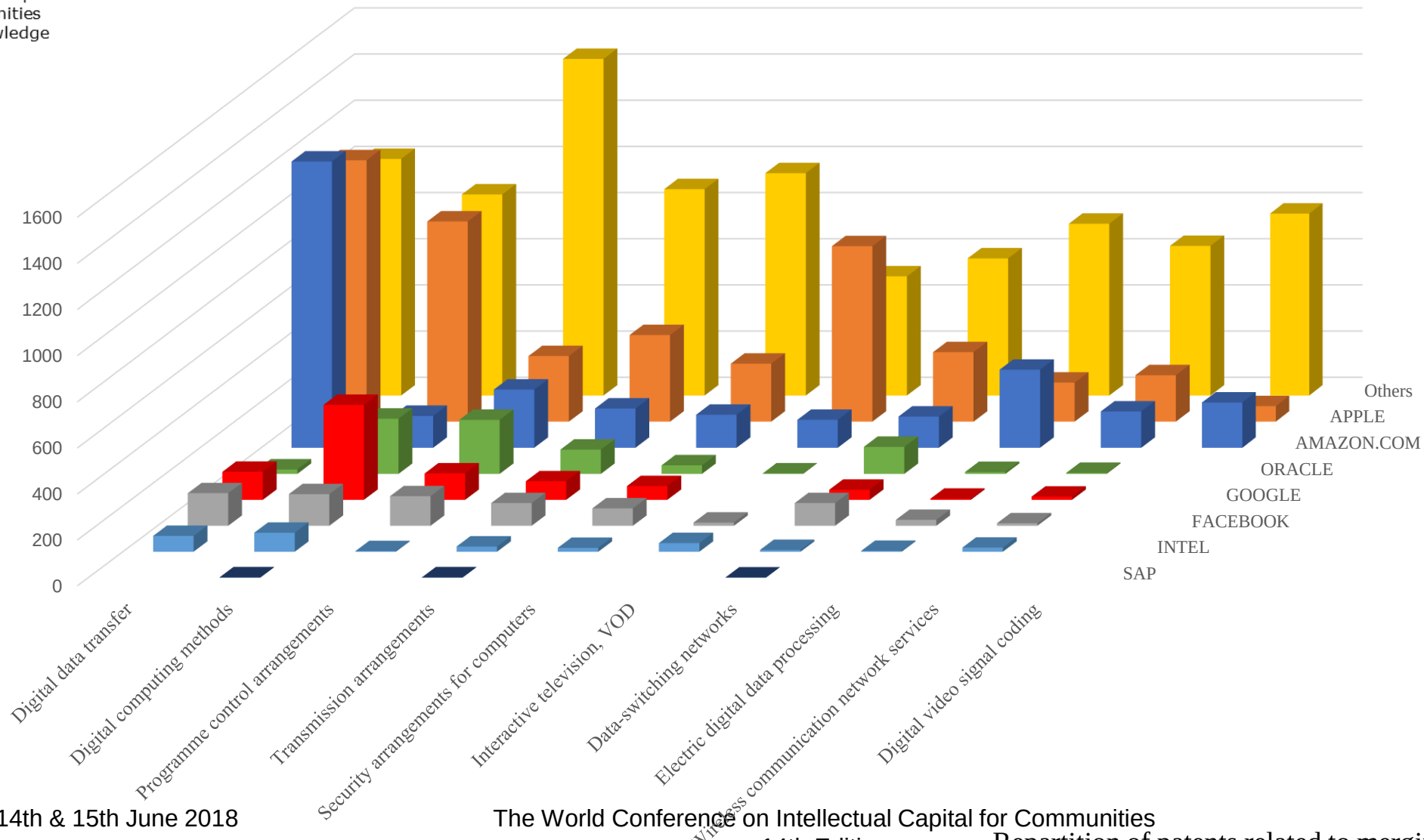
Merging Artificial Intelligence



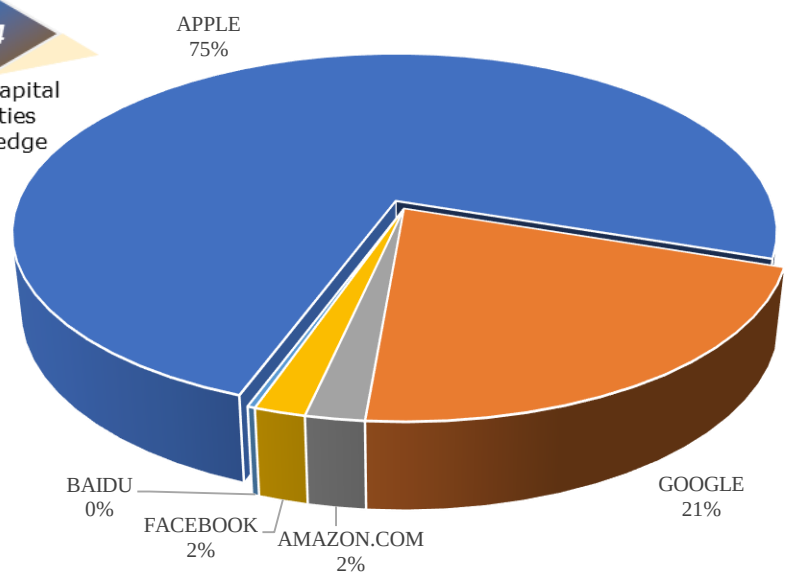
Number of patents related to merging AI: **27.140**

Top 10 domaine of merging AI

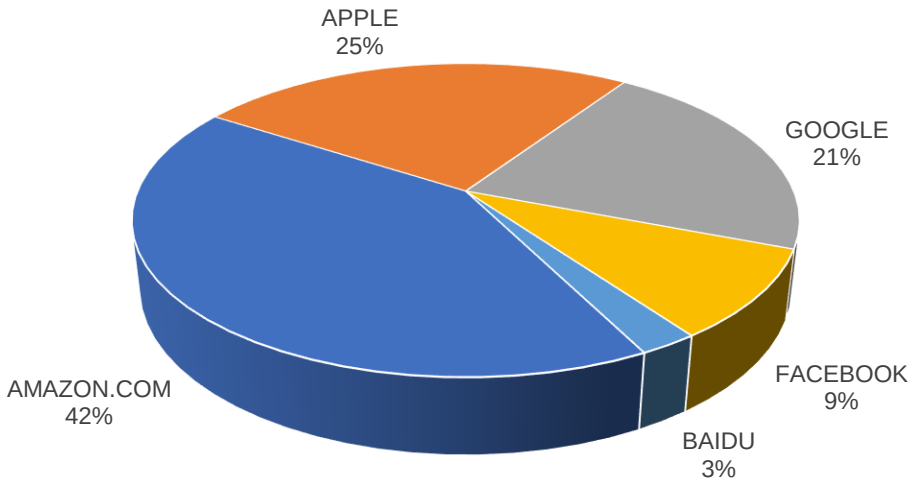


Repartition of patents related to merging AI

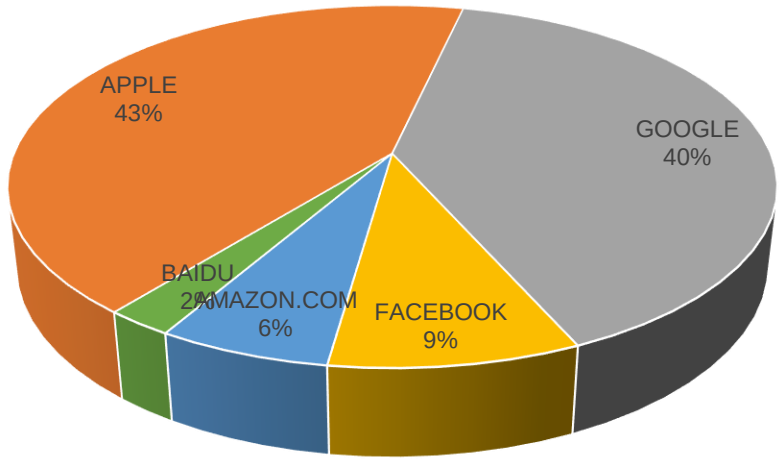
Design



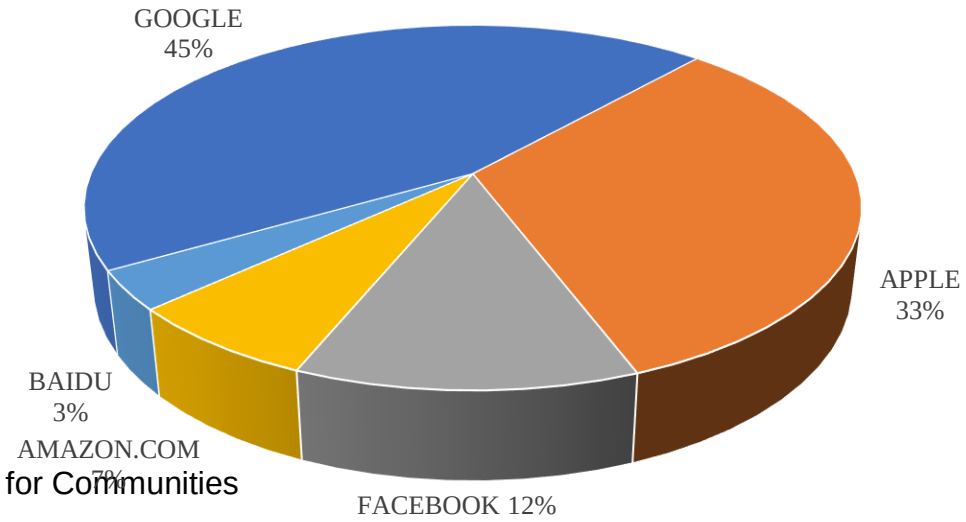
Trademarks



Patents



Merging AI



6- The geography of the to be studied platform

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- 6.2. Qualitative analysis (interview guide)

Part 1. Platforms, platformisation and the firm's strategy

1. How do you address strategically the issue of platformisation of activities?
2. What impact on business models? What connection with your digital strategy?
3. What governance structure for your platform strategy ?
4. What role your internal resources, versus your ecosystem, supply chain , communities and alike ?
5. Any further strategic /business models issues?

Part 2. Platform and organizational design for Innovation practices

6. What roles for the platform dimension in the definition of your products, services ?
7. What roles for the platform dimension in your knowledge flow internally as well as ?
8. What roles for the platform in data management ?
9. What role for the platform dimension in interactions with customers, suppliers and complementors?
10. What role for the plaform dimension in IPRs dimension?
11. What role for the platform dimension in the data privacy issues?
12. Any further issues?

Part 3. Description of a specific platform

Based on a specific platform, could you describe?

13. Its economic and business stakes (users, exchanges…) ?
14. The governance structure especially with clients, partners and complementors ?
15. Your pricing /economic business model (the two-sided issue) ?
16. How concretely it is orchestrated? decentralization versus centralization ?
17. The barriers and difficulties in implementation ?
18. Any further issues?

Part 4. Regional specificities

19. Any difference between Asia, US and Europe ?

Interim conclusion

- Studying platforms behaviour with regards to intangible resources is a further step to the research and policy agenda on platforms
- IPRs analysis allow to delineate specific behaviour and dominance for these critical resources
- Intangibles resources analysis allow to complete the dualistic approach to the two-sided market
- A refined taxonomy of intangibles for platforms is needed in order to better refine the sources of market power and innovation

Thank you!

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