Chapter 8

Ethical and Social Issues in E-Commerce

Part I:

Understanding Ethical and Social Issues

in E-Commerce

UNIQUE FEATURES OF E-COMMERCE TECHNOLOGY AND THEIR POTENTIAL
ETHICAL AND/OR SOCIAL IMPLICATIONS

E-COMMERCE DIMENSION	TECHNOLOGY
Ubiquity—Interne	t/Web technology is

POTENTIAL ETHICAL, SOCIAL, AND/OR POLITICAL SIGNIFICANCE

Ubiquity—Internet/Web technology is available everywhere (at work, at home, and elsewhere via mobile devices) and anytime.

Work and shopping can invade family life; shopping can distract workers at work, lowering their productivity; use of mobile devices can lead to automobile and industrial accidents. Presents confusing issues of "nexus" to taxation authorities.

Global reach—The technology reaches across national boundaries and around the Earth.

Reduces cultural diversity in products; weakens small, local firms while strengthening large, global firms; moves manufacturing production to low-wage areas of the world; weakens the ability of all nations—large and small—to control their information destiny.

Universal standards—There is one set of technology standards, namely, Internet standards.

Increases vulnerability to malware and hacking attacks worldwide, affecting millions of people at once. Increases the likelihood of "information" crime, crimes against systems, and deception.

Richness—Video, audio, and text messages are possible.

A "screen technology" that reduces the use of text and potentially the ability to read by focusing instead on video and audio messages. Potentially very persuasive messages that may reduce reliance on multiple, independent sources of information.

Interactivity—The technology works through interaction with the user.

The nature of interactivity at commercial sites can be shallow and meaningless. Customer e-mails are frequently not read by human beings. Customers do not really "co-produce" the product as much as they "co-produce" the sale. The amount of "customization" of products that occurs is minimal, occurring only within predefined platforms and plug-in options.

Information density—The technology reduces information costs and raises quality.

Although the total amount of information available to all parties increases, so does the possibility of false and misleading information, unwanted information, and invasion of solitude. Trust, authenticity, accuracy, completeness, and other quality features of information can be degraded. The ability of individuals and organizations to make sense of this plethora of information is limited.

Personalization/Customization—The technology allows personalized messages to be delivered to individuals as well as to groups.

Opens up the possibility of intensive invasion of privacy for commercial and governmental purposes that is unprecedented.

Social technology—The technology enables user content generation and social networks.

Creates opportunities for cyberbullying, abusive language, and predation; challenges concepts of privacy, fair use, and consent to use posted information; creates new opportunities for surveillance into private lives by authorities and corporations.

理解電子商務引發的道德和社會問題

The major ethical and social issues that have developed around e-commerce can be loosely categorized into four moral dimensions: information rights, property rights, governance, and public safety and welfare.

電子商務發展過程中所出現的道德和社會問題大致可從四個維度即信息權、財產權、監管、公共安全與福利來探討.

• **Information rights:** What rights to their own personal information do individuals have in a public marketplace, or in their private homes, when Internet technologies make information collection so pervasive and efficient? What rights do individuals have to access information about business firms and other organizations?

信息權:當互聯網技術能輕而易舉地收集各種信息時,人們在公共場所或私人領域中對自己的個人信息還享有哪些權利?對企業和其他組織的信息,人們又擁有哪些訪問權?

• **Property rights:** How can traditional intellectual property rights be enforced in an Internet world where perfect copies of protected works can be made and easily distributed worldwide in seconds?

財產權: 互聯網環境下版權作品的複製可在極短時間內完成幷擴散到全世界, 因此傳統知識產權保護政策應如何執行?

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• **Governance:** Should the Internet and e-commerce be subject to public laws? And if so, what law-making bodies have jurisdiction?

監管: 互聯網和電子商務活動是否應受公共法律的約束? 如果是, 哪些機構具有管轄權?

• Public safety and welfare: What efforts should be undertaken to ensure equitable access to the Internet and e-commerce channels? Should governments be responsible for ensuring that schools and colleges have access to the Internet? Are certain online content and activities—such as fake news—a threat to public safety and welfare? What about connected cars? Should mobile commerce be allowed from moving vehicles?

公共安全與福利:應采取哪些措施來保證大家都能公平地使用互聯網和電子商務? 政府是否應該負責確保中學和高校能能接入互聯網? 某些特定內容(例如假新聞)是否對公共安全與福利構成威脅?互聯汽車呢?是否應允許移動車輛進行移動商務呢?

理解電子商務引發的道德和社會問題

Ethical principles

• The Golden Rule: Do unto others as you would have them do unto you. Putting yourself in the place of others and thinking of yourself as the object of the decision can help you think about fairness in decision-making.

黄金法則: "已己所不欲,勿施于人".站在他人的立場思考,把自己看成决策結果的影響 對象能够幫助你在决策時兼顧公平性.

• Universalism: If an action is not right for all situations, then it is not right for any specific situation. Ask yourself, "If we adopted this rule in every case, could the organization, or society, survive?"

普遍主義原則:如果一項决策對所有情况都不適用,那麼對于任何特定情况都不會合適(伊曼努爾·康德的絕對命令).問問自己:"如果每項决策都遵循某個原則,組織或社會能持續發展嗎?"

理解電子商務引發的道德和社會問題

Ethical principles

• Slippery Slope: If an action cannot be taken repeatedly, then it is not right to take at all. An action may appear to work in one instance to solve a problem but, if repeated, would result in a negative outcome. This rule can also be stated as "Once started down a slippery path, you may not be able to stop."

滑坡理論:如果某個方案無法重複使用,那麼它就根本不應該被采納.有些方案在某種情况下能够解决問題,但重複使用可能導致負面結果.簡單來說,這條原則意味著"一旦開始從光滑的斜坡上往下走,你就可能無法停止".

• Collective Utilitarian Principle: Take the action that achieves the greater value for all of society. This rule assumes that you can prioritize values in a rank order and can understand the consequences of various courses of action.

集體功利主義原則:選擇能實現社會整體價值最大化的方案.這條準則假定我們已對各種方案進行價值排序,并且清楚地知道不同行為的後果.

理解電子商務引發的道德和社會問題

Ethical principles

• **Risk Aversion:** Take the action that produces the least harm, or the least potential cost. Some actions have extremely high failure costs of very low probability (e.g., building a nuclear generating facility in an urban area) or extremely high failure costs of moderate probability (speeding and automobile accidents). Avoid the high-failure-cost actions, and choose instead those actions whose consequences would not be catastrophic even if they were failures.

風險規避原則:選擇產生最少負面效應或最小潜在成本的决策.有些方案一日失敗,代價極高,這些方案中有的發生概率很低(如在城市內建造核電站),有的發生概率中等(如超速駕駛導致交通事故).儘量避免若失敗則代價非常大的决策,而選擇那些即使失敗也不至于造成灾難性後果的方案.

- **No Free Lunch:** Assume that virtually all tangible and intangible objects are owned by someone else unless there is a specific declaration otherwise. (This is the ethical "no free lunch" rule.) If something someone else has created is useful to you, it has value, and you should assume that the creator wants compensation for this work.
 - "天下沒有免費的午餐"原則:除非特別說明,否則應當假定一切有形和無形的對象都歸他人所有.如果他人創造的東西對你有用,那麼它就有價值,你就應當默認創造者會向你索取報酬.

理解電子商務引發的道德和社會問題

Ethical principles

- **Perfect Information Rule:** Assume that the results of your decision on a matter will be the subject of the lead article in the New York Times the next day. Will the reaction of readers be positive or negative? Would your parents, friends, and children be proud of your decision? Most criminals and unethical actors assume imperfect information and, therefore, that their decisions and actions will never be revealed. When making decisions involving ethical dilemmas, it is wise to assume perfect information markets. **完備信息規則:** 假設你對某件事的最終决定將會成爲明天《紐約時報》的頭條新聞,那麼讀者的反應會是正面的還是負面的?你的父母、朋友和孩子會因你的决定而感到自豪嗎?大多數罪犯和不道德者都認爲信息是不完備的從而天真地以爲事情永遠不會被別人知道. 因此,當你在道德困境中必須做出抉擇時,最好事先假設存在具有完備信息的市場..
- The Social Contract Rule: Would you like to live in a society in which the principle you are supporting would become an organizing principle of the entire society? For instance, you might think it is wonderful to download illegal copies of Hollywood movies, but you might not want to live in a society that does not respect property rights, such as your property rights to the car in your driveway.

社會契約法則:如果你所支持的原則變成整個社會普遍接受的原則,你願意生活在這樣的社會中嗎?例如,你也許認爲可以下載非法複製的好萊塢電影是一件很棒的事,但你肯定不願生活在不尊重產權(私家車道上的汽車所有權、學術論文或原創藝術品的知識產權)的社會.

Part II:

Privacy and Information Rights

Privacy and Information Rights

- Privacy 隱私權
 - Moral right of individuals to be left alone, free from surveillance or interference from other individuals, or organizations

不受其他個人或組織監督或幹擾的個人的道德權利

- Information Privacy 信息隱私
 - Right to control information collected about them 有權控制收集到的關于他們的信息
 - Right to know when information is collected and give consent 有權知道他們的信息是何時被收集的,並且必須在收集其個人信息之前予以同意
 - Right to personal information due process
 有權獲得個人信息的適當程序
 - Right to have personal information stored in a secure manner
 有權以安全的方式存儲其個人信息

Privacy and Information Rights

Principle	Description
Notice/Awareness (core principle)	Sites must disclose their information practices before collecting data. Includes identification of collector, uses of data, other recipients of data, nature of collection (active/inactive), voluntary or required, consequences of refusal, and steps taken to protect confidentiality, integrity, and quality of the data.
Choice/Consent (core principle)	There must be a choice regime in place allowing consumers to choose how their information will be used for secondary purposes other than supporting the transaction, including internal use and transfer to third parties. Opt-in/opt-out must be available.
Access/Participation	Consumers should be able to review and contest the accuracy and completeness of data collected about them in a timely, inexpensive process.
Security	Data collectors must take reasonable steps to assure that consumer information is accurate and secure from unauthorized use.
Enforcement	There must be a mechanism to enforce FIP principles in place. This can involve self-regulation, legislation giving consumers legal remedies for violations.

The FTC's Fair Information Practice Principles

Information Collected by Websites

• Data collected includes 收集的數據包括

- Personally identifiable information (PII): Any data that can be used to identify, locate, or contact an individual

個人身份信息: 任何可用于識別、定位或聯繫個人的信息

 Anonymous information: Demographic and behavioral information, such as age, occupation, income, zip code, and browsing behavior without identifying who you are.

匿名信息:人口統計和行爲信息,例如年齡、職業、收入、郵政編碼和瀏覽行爲,但不會識別您的身份

• Types of data collected 收集的數據類型

- Name, address, phone, e-mail
 姓名、地址、電話號碼、電子郵箱
- Bank and credit accounts, gender, age, occupation, education 銀行賬戶、信用卡賬戶、性別、年齡, 職業,、受教育程度
- Preference data, transaction data, clickstream data, browser type
 偏好數據、交易數據、點擊流數據、瀏覽器類型

MAJOR ONLINE INFORMATION-GATHERING TOOLS

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Information

AND THEIR IMPACT ON PRIVACY INTERNET CAPABILITY IMPACT ON PRIVACY Used to track location and share photos, addresses, phone Smartphones and apps numbers, searches, and other behaviors to marketers. Advertising networks Used to track individuals as they move among thousands of websites. Likely to be impacted by the forthcoming phase-out of third-party web trackers. Social networks Used to gather information on user-provided content such as books, music, friends, and other interests, preferences, and lifestyles. Used to track individuals at a single site. Store user activity First-party cookies while on the website and enable login, shopping carts, understanding user behavior, and navigation features. Third-party web trackers Placed by advertising networks and data collection firms with (cookies and beacons) the permission of the website being visited. Used to track online behavior, searches, and sites visited across thousands of sites for the purpose of displaying "relevant" advertising. Slowly being phased out in response to consumer backlash regarding privacy invasion. Persistent cookies Remain active after a browsing session and stay active for a set period of time; useful in retargeting ads and cross-site tracking. Device fingerprinting Programs based on third-party servers that uniquely identify a device based on its operating system, local network, browser, graphics chip, graphics driver, installed fonts, and other features. Search engine behavioral Uses prior search history, demographics, expressed interests, location, or other user-entered data to target advertising. targeting Uses software installed at the ISP level to track all user Deep packet inspection clickstream behavior. Used to collect detailed payment and purchase information. Shopping carts Online forms that users voluntarily fill out in return for a Forms promised benefit or reward that are linked with dickstream or other behavioral data to create a personal profile.

Site transaction logs Used to collect and analyze detailed information on page content viewed by users.

Search engines Used to trace user statements and views on newsgroups, chat

groups, and other public forums on the Web and to profile users' social and political views. Google returns name, address, and links to a map with directions to the address when a phone

number is entered.

IP address The unique number assigned to every device on the Internet,

which is revealed by users when they use the Internet. Used to identify the ISP provider, region, local area network IP, and potentially the individual device. With a few other pieces of information, individuals are easily identified. Used by law enforcement, telecommunications companies, and ad firms to trace communications and user behavior across the Internet.

Integrates the login information on smartphones with browser Cross-device tracking tracking from websites to create an integrated file on specific

users; shared with ad network firms.

Protections for Online Privacy

在綫隱私保護

INTERNET USERS' EFFORTS TO PRESERVE PRIVACY

Cleared web browser history or cookies.

Refused to provide information if felt wasn't relevant.

Used web browser settings to disable or turn off cookies.

Deleted or edited something previously posted online.

Used a temporary e-mail address or user name.

Provided inaccurate or false information about self.

Refused to use website that required real name.

Used public computer in order to browse anonymously.

Attempted to get something posted online about them removed.

Encrypted phone calls, text messages, or e-mail.

Used proxy server, Tor, or VPN to browse Web anonymously.

Protection

在綫隱私保護

Apple Intelligent Tracking Prevention (ITP) Apple Safari web browser Apple Intelligent Tracking Prevention (ITP) Apple Safari web browser Apple Osafari web browser FLEDGE API; Topics API FLEDGE API; Topics API Tools now being tested by Google to replace cookie-based, targeted advertising in the Google Chrome web browser Apple App Tracking Transparency (ATT) Apple iOS Requires any app that wants to track user activity and share it with other apps or websites to ask user for permission Differential privacy software Apple Apple Reduces the ability to merge different files and de-anonymize consumer data Privacy default browsers Epic, Brave, DuckDuckGo Privacy default browsers Epic, Brave, DuckDuckGo Bitdefender, Avast One, Spybor Spyware blockers Bitdefender, Avast One, Spybor Adb blockers Most browsers; add-on programs: Adblock Plus Secure e-mail Anonymous remailers Most browsers; add-on programs: Adblock Plus Secure e-mail Anonymous remailers Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Cookie blockers and managers Public key encryption Symantec Encryption Program that encrypts your mail and documents	TECHNO	LOGICAL PROTECTIONS	FOR ONLINE PRIVACY
Tracking Prevention (ITP) Tracking Prevention (ITP) Google Privacy Sandbox FLEDGE API; Topics API FLEDGE API; Topics API Tools now being tested by Google to replace cookie-based, targeted advertising in the Google Chrome web browser Apple App Tracking Transparency (ATT) Apple iOS Requires any app that wants to track user activity and share it with other apps or websites to ask user for permission Differential privacy software Apple Apple Reduces the ability to merge different files and de-anonymize consumer data Privacy default browsers Epic, Brave, DuckDuckGo Eliminates tracking cookies and prevents IP tracking Apps that encrypt text and other data that is transferred using smartphones Spyware blockers Bitdefender, Avast One, Spybot Bitdefender, Avast One, Spybot Ad blockers Most browsers; add-on programs: Adblock Plus Fereunts calls to ad servers; restricts downloading of images at user request Fereuntal Anonymous remailers Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Cookie blockers and managers Public key encryption Symantec Encryption Program that encrypts your mail	TECHNOLOGY	PRODUCTS	PROTECTION
to replace cookie-based, targeted advertising in the Google Chrome web browser Apple App Tracking Transparency (ATT) Apple iOS Requires any app that wants to track user activity and share it with other apps or websites to ask user for permission Differential privacy software Apple Apple Reduces the ability to merge different files and de-anonymize consumer data Privacy default browsers Epic, Brave, DuckDuckGo Eliminates tracking cookies and prevents IP tracking Message encryption Signal, Gdata Secure Chat, Telegram, Ceerus Spyware blockers Bitdefender, Avast One, Spybot Ad blockers Most browsers; add-on programs: Adblock Plus Secure e-mail Hushmail, ProtonMail Anonymous remailers Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Most browsers Blocks third-party cookies Blocks third-party cookies		Apple Safari web browser	tracking cookies and blocks trackers'
Transparency (ATT) Differential privacy software Apple Apple Reduces the ability to merge different files and de-anonymize consumer data Privacy default browsers Epic, Brave, DuckDuckGo Eliminates tracking cookies and prevents IP tracking Message encryption Signal, Gdata Secure Chat, Telegram, Ceerus Spyware blockers Bitdefender, Avast One, Spybot Most browsers; add-on programs: Adblock Plus Secure e-mail Anonymous remailers Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Public key encryption Apple Reduces the ability to merge different files and de-anonymize consumer data Eliminates tracking cookies and prevents IP tracking Apps that encrypt text and other data that is transferred using smartphones Detects and removes spyware, adware, keyloggers, and other malware Prevents calls to ad servers; restricts downloading of images at user request E-mail and document encryption Enhanced privacy protection for e-mail Enhanced privacy protection for web browsing Blocks third-party cookies Blocks third-party cookies	Google Privacy Sandbox	FLEDGE API; Topics API	to replace cookie-based, targeted advertising in the Google Chrome
Privacy default browsers Epic, Brave, DuckDuckGo Eliminates tracking cookies and prevents IP tracking Message encryption Signal, Gdata Secure Chat, Telegram, Ceerus Apps that encrypt text and other data that is transferred using smartphones Spyware blockers Bitdefender, Avast One, Spybot Ad blockers Most browsers; add-on programs: Adblock Plus Secure e-mail Anonymous remailers Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Cookie blockers and managers Public key encryption Epic, Brave, DuckDuckGo Eliminates tracking cookies and prevents IP tracking Apps that encrypt text and other data that is transferred using smartphones Detects and removes spyware, adware, keyloggers, and other malware Prevents calls to ad servers; restricts downloading of images at user request E-mail and document encryption Enhanced privacy protection for e-mail Enhanced privacy protection for web browsing Blocks third-party cookies		Apple iOS	user activity and share it with other apps or websites to ask user for
Message encryption Signal, Gdata Secure Chat, Telegram, Ceerus Apps that encrypt text and other data that is transferred using smartphones Spyware blockers Bitdefender, Avast One, Spybot Detects and removes spyware, adware, keyloggers, and other malware Ad blockers Most browsers; add-on programs: Adblock Plus Prevents calls to ad servers; restricts downloading of images at user request Secure e-mail Hushmail, ProtonMail E-mail and document encryption Anonymous remailers W3 Anonymous Remailer Enhanced privacy protection for e-mail Anonymous surfing Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Most browsers Blocks third-party cookies Blocks third-party cookies Program that encrypts your mail		Apple	files and de-anonymize consumer
Telegram, Ceerus Bitdefender, Avast One, Spybot Most browsers; add-on programs: Adblock Plus Secure e-mail Anonymous remailers Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Program that is transferred using smartphones Detects and removes spyware, adware, keyloggers, and other malware Prevents calls to ad servers; restricts downloading of images at user request E-mail and document encryption Enhanced privacy protection for e-mail Enhanced privacy protection for web browsing Blocks third-party cookies Program that encrypts your mail	Privacy default browsers	Epic, Brave, DuckDuckGo	
Spybot adware, keyloggers, and other malware Ad blockers Most browsers; add-on programs: Adblock Plus Prevents calls to ad servers; restricts downloading of images at user request Secure e-mail Hushmail, ProtonMail E-mail and document encryption Anonymous remailers W3 Anonymous Remailer Enhanced privacy protection for e-mail Anonymous surfing Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Cookie blockers and managers Public key encryption Symantec Encryption Program that encrypts your mail	Message encryption		
programs: Adblock Plus downloading of images at user request Secure e-mail Anonymous remailers W3 Anonymous Remailer E-mail and document encryption Enhanced privacy protection for e-mail Anonymous surfing Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Cookie blockers and managers Public key encryption Program that encrypts your mail	Spyware blockers		adware, keyloggers, and other
Anonymous remailers W3 Anonymous Remailer Enhanced privacy protection for e-mail Anonymous surfing Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Cookie blockers and managers Public key encryption W3 Anonymous Remailer Enhanced privacy protection for web browsing Enhanced privacy protection for web browsing Blocks third-party cookies Program that encrypts your mail	Ad blockers		downloading of images at user
Anonymous surfing Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Cookie blockers and managers Public key encryption Most browsers (i.e., Chrome Incognito; Safari Private Browsing), Tor Browser Blocks third-party cookies Program that encrypts your mail	Secure e-mail	Hushmail, ProtonMail	E-mail and document encryption
Incognito; Safari Private Browsing), Tor Browser Cookie blockers and managers Public key encryption Incognito; Safari Private browsing Blocks third-party cookies Program that encrypts your mail	Anonymous remailers	W3 Anonymous Remailer	
managers Public key encryption Symantec Encryption Program that encrypts your mail	Anonymous surfing	Incognito; Safari Private	
		Most browsers	Blocks third-party cookies
	Public key encryption		

Part III:

Intellectual Property Protection

- Intellectual property:
 - All tangible and intangible products of human mind 所有有形和無形的人類思想結晶
- Major ethical issue: 主要道德問題
 - How should we treat property that belongs to others? 我們應該如何對待屬他人的財産?
- Major social issue: 主要社會問題
 - Is there continued value in protecting intellectual property in the Internet age? 互聯網時代知識產權保護是否仍然有價值?
- Major political issue: 主要時政問題
 - How can Internet and e-commerce be regulated or governed to protect intellectual property?

如何規範、管理互聯網和電子商務,才能保護知識產權制度?

- Three main types of protection 三種主要保護類型
 - Copyright 版權法
 - Patent 專利法
 - Trademark law 商標法
- Goal of intellectual property law 知識產權法的目的
 - Balance two competing interests—public and private
 平衡衝突雙方(公衆和個人)的利益
 - The public interest is served by the creation and distribution of inventions, works of art, music, literature, and other forms of intellectual expression. The private interest is served by rewarding people for creating these works through the creation of a time-limited monopoly granting exclusive use to the creator.

公衆利益指的是共享發明、藝術品、音樂、文學作品等各種形式的只是產品;私人利益是指作者自身在一段時間內對作品的獨占權,以及由此獲得的各種獎勵.

Copyright 版權

• Protects original forms of expression (not ideas) such as writings (books, periodicals, lecture notes), art, drawings, photographs, music, motion pictures, performances, and computer programs from being copied by others for a period of time.

保護原始的表達形式(而不是思想),例如著作(書籍、期刊、講義)、藝術作品、繪畫作品、攝影作品、音樂、電影、表演和計算機程序,在一段時間內不被他人複製.

Doctrine of Fair Use 合理使用原則

• The doctrine of fair use permits teachers, writers, and others to use copyrighted materials without permission under certain circumstances.

合理使用原則允許教師、作家和其他人在某些情况下可不事先獲得授權便可使用受版權保護的材料.

Copyright 版權

CONSIDERATIONS TO COPYRIGHT PROTECTIONS
INTERPRETATION
Nonprofit or educational use versus for-profit use.
Creative works such as plays or novels receive greater protection than factual accounts (e.g., newspaper accounts).
A stanza from a poem or a single page from a book, but not the entire poem or an entire book chapter, would be allowed.
Will the use harm the marketability of the original product? Has it already harmed the product in the marketplace?
A last-minute, unplanned use in a classroom versus a planned infringement.

Patents 專利

- Grant owner 20-year monopoly on ideas behind an invention 賦予發明創造者對其創新理念擁有長達20年的排他獨占權
- Invention must be new, non-obvious, novel 發明必須是全新的、非凡的、新奇的
- Patents are very different from copyrights because patents protect the ideas themselves and not merely the expression of ideas. There are four types of inventions for which patents are granted under patent law: machines, man-made products, compositions of matter, and processing methods.

專利與版權有很大不同,專利除了保護思想的表達形式外,還保護思想本身.根據專利法授予專利權的發明有:機器、手工製品、合成物和工藝流程.

Patents 專利

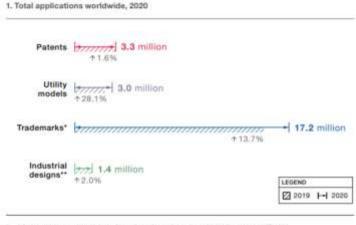
Patents Granted by the U.S. Patent Office, 2009

Rank	Company Name	2009 Patents
1	INTERNATIONAL BUSINESS MACHINES CORP	4,914
2	SAMSUNG ELECTRONICS CO LTD KR	3,611
3	MICROSOFT CORP	2,906
4	CANON K K JP	2,206
5	PANASONIC CORP JP	1,829
6	TOSHIBA CORP JP	1,696
7	SONY CORP JP	1,680
8	INTEL CORP	1,537
9	SEIKO EPSON CORP JP	1,330
10	HEWLETT-PACKARD DEVELOPMENT COLP	1,273

Patents 專利

Global intellectual property applications and active IP rights

Trademark filing activity boomed in 2020, defying a global economic downturn



^{*} refers to class count – the total number of goods and services classes specified in trademark applications.

Global patent filing bounced back to a 1.6% growth in 2020, while trademark and industrial design filing activity grew by 13.7% and 2%, respectively. In terms of volume, patent filings around the world numbered 3.3 million, trademark filing activity 17.2 million and industrial design filing activity 1.4 million. Applications for utility models – a special form of patent right – grew by 28.1% to reach 3 million applications.

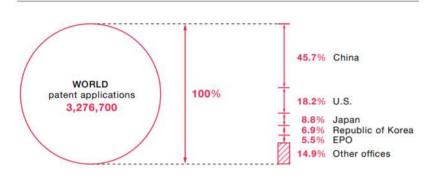
^{**} refers to design count – the total number of designs contained in industrial design applications.
Source: WIPO Statistics Database, September 2021.

Patents 專利

Patents and utility models

The top five offices accounted for 85.1% of the world total

4. Percentage shares of total patent applications by the top five offices, 2020



EPO is the European Patent Office.

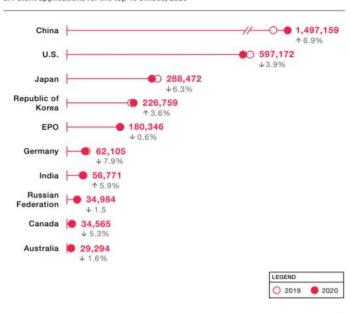
Source: WIPO Statistics Database, September 2021.

The top five offices together accounted for 85.1% of total patent applications in 2020. This is 7.7 percentage points higher than the combined share for the top five in 2010. This is mainly due to a strong growth in applications originating from China, whose share of the world total has more than doubled from 19.6% in 2010 to 45.7% in 2020.

Patents 專利

Following a sharp fall in 2019, China's office rebounded to record a 6.9% growth in filings in 2020

5. Patent applications for the top 10 offices, 2020



EPO is the European Patent Office.

Source: WIPO Statistics Database, September 2021.

In 2020, China's IP office returned to growth, with around 1.5 million patent applications filed for the year. This was 2.5 times more than received by the IP office of the second leading country, the U.S. (597,172). The U.S. was followed by the office of Japan (288,472), the Republic of Korea (226,759) and the European Patent Office (EPO) (180,346). Among the top 10 offices, only three – China (+6.9%), India (+5.9%) and the Republic of Korea (+3.6%) – recorded an increase in patent applications in 2020.

2021年 產權組織事實與數據. https://www.wipo.int/publications/zh/details.jsp?id=4577

Patents 專利

Which countries specialize in which technologies? 8. The top three technology fields for each of the top five origins, 2017-2019 Computer technology communication Electrical machinery, apparatus, energy Measurement Mechanical elements Medical technology Optics Semiconductors Transport

Numbers in gray show percentage share.

Sources: WPO Statistics Database and EPO PATSTAT database, September 2021.

Analyzing patents by technology shows a country's areas of strength or specialization. For example, applicants from China (8.6% of all published applications) and the U.S. (11.8%) filed most heavily in computer technology, applicants from Japan (10%) and the Republic of Korea (8.5%) in electrical machinery, and those from Germany (10.6%) in transport.

Patents

China-based telecoms giant Huawei Technologies, with 5,464 published PCT applications, was the top filer in 2020 10. Top 10 PCT applicants, 2020 **Huawei Technologies** BOE **OPPO Mobile** Telecommunications 5,464 Technology 1,892 Mitsubishi Electric Panasonic 2,810 1,793 1,611 Republic of Korea Samsung Electronics LG Electronics 3,093 2,759 Qualcomm 2,173 LEGEND Ericsson Telecom firms 1,989 Source: WIPO Statistics Database, September 2021.

For the fourth consecutive year, China-based telecoms giant Huawei Technologies, with 5,464 published PCT applications, was the top filer in 2020. It was followed by Samsung Electronics of the Republic of Korea (3,093), Mitsubishi Electric Corp. of Japan (2,810), LG Electronics Inc. of the Republic of Korea (2,759) and Qualcomm Inc. of the U.S. (2,173). Among the top 10 filers, LG Electronics recorded the fastest growth (+67.6%) in published applications in 2020 and moved up from 10th position in 2019 to rank 4th in 2020.

Patents 專利



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国家知识产权局

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Patents 專利

How to apply for a patent in the Macao SAR?

A: The applicant needs to complete an <u>application form</u> of the relevant patent type, and then submit the application with the necessary documents to the Economic and Technological Development Bureau.

Please note that the documents submitted should be written or translated in Chinese, if the applicant submits a request for making an examination report in respect of the application.

For details, please refer to <u>"Intellectual Property – Administrative Procedures"</u> in the website of the Economic and Technological Development Bureau.

如何在澳門特別行政區申請專利保護?

答:申請人因應擬申請的專利類別填寫相關的表格,連同所需文件,向經濟及科技發展局提交申請.

值得注意的是, 專利注册申請人提出要求製作審查報告書時, 所提交的文件必須以中文撰寫或翻譯成中文.

關于具體細節,請瀏覽經濟及科技發展局網頁內"知識產權-行政手續"欄目.

Patents 專利



https://www.ipd.gov.hk/chi/patents.htm

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United States Patent and Trademark Office 美國專利與商標局



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IP Australia 澳大利亞知識產權局



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國家知識產權局提供專利檢索及分析系統

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United States Patent and Trademark Office

Trademarks 商標

- A mark used to identify, distinguish goods, and indicate their source 用於標識、區分商品並顯示商品來源的標志
- Purpose 目的
 - Ensure consumer gets what is paid for/expected to receive 確保消費者付款之後得到貨真價實的商品
 - Protect owner against piracy and misappropriation
 保護商標所有者免遭隱私侵犯和商標盜用

Trademarks 商標

- A trademark is "any word, name, symbol, or device, or any combination thereof . . . used in commerce . . . to identify and distinguish . . . goods . . . from those manufactured or sold by others and to indicate the source of the goods."
 - 商標是"任何字詞、名字、符號、圖案或它們的任意組合……用于商業用途……標識和區別……商品……與其他廠家和銷售商的商品加以區分并指示出商品的真正來源".
- Trademark law is a form of intellectual property protection for trademarks—a mark used to identify and distinguish goods and indicate their source.
 - 商標法是一種針對商標(即用以標識、區分商品幷顯示商品真正來源的標志)的知識產權保護形式.
- The purpose of trademark law is twofold. First, trademark law protects the public in the marketplace by ensuring that it gets what it pays for and wants to receive. Second, trademark law protects the owner—who has spent time, money, and energy bringing the product to the marketplace—against piracy and misappropriation.
 - 制定商標法主要有兩個目的. 第一, 確保消費者付款之後得到貨真價實的商品, 保護消費者的市場利益; 第二, 保護商標所有者 (那些投入相當時間、資金和精力創造出商品并引入市場的經濟主體)免 遭隱私侵犯和商標盜用).

	INTERNET AND TRADEMARK LAW EXAMPLES				
	ACTIVITY	DESCRIPTION	EXAMPLE CASE		
In	Cybersquatting	Registering domain names similar or identical to trademarks of others to extort profits from legitimate holders	E. & J. Gallo Winery v. Spider Webs Ltd., 129 F. Supp. 2d 1033 (S.D. Tex., 2001) aff'd 286 F. 3d 270 (5th Cir., 2002)		
Trad	Cyberpiracy Registering domain names similar or identical to trademarks of others to divert web traffic to their own sites		Ford Motor Co. v. Lapertosa, 2001 U.S. Dist. LEXIS 253 (E.D. Mich., 2001); PaineWebber Inc. v. Fortuny, Civ. A. No. 99-0456-A (E.D. Va., 1999); Playboy Enterprises, Inc. v. Global Site Designs, Inc., 1999 WL 311707 (S.D. Fla., 1999); Audi AG and Volkswagen of America Inc. v. Bob D'Amato (No. 05-2359; 6th Cir., November 27, 2006)		
	Metatagging	Using trademarked words in a site's metatags	Bernina of America, Inc. v. Fashion Fabrics Int'l, Inc., 2001 U.S. Dist. LEXIS 1211 (N.D. III., 2001); Nissan Motor Co., Ltd. v. Nissan Computer Corp., 289 F. Supp. 2d 1154 (C.D. Cal., 2000), aff'd, 246 F. 3rd 675 (9th Cir., 2000)		
Keywording		Placing trademarked keywords on web pages, either visible or invisible	Playboy Enterprises, Inc. v. Netscape Communications, Inc., 354 F. 3rd 1020 (9th Cir., 2004); Nettis Environment Ltd. v. IWI, Inc., 46 F. Supp. 2d 722 (N.D. Ohio, 1999); Government Employees Insurance Company v. Google, Inc., Civ. Action No. 1:04cv507 (E.D. VA, 2004); Google, Inc. v. American Blind & Wallpaper Factory, Inc., Case No. 03-5340 JF (RS) (N.D. Cal., April 18, 2007)		
	Linking	Linking to content pages on other sites, bypassing the home page	Ticketmaster Corp. v. Tickets.com, 2000 U.S. Dist. Lexis 4553 (C.D. Cal., 2000)		
	Framing	Placing the content of other sites in a frame on the infringer's site	The Washington Post, et al. v. TotalNews, Inc., et al. (S.D.N.Y., Civil Action Number 97-1190)		

Trade Secrets 商業機密

- Much of the value created by a firm lies not in copyrights, patents, or even trademarks. There is a kind of intellectual property that has to do with business procedures, formulas, and methods of manufacture and service delivery, from which the firm derives value and which it does not want to share with others in the form of a patent application or copyright application. This type of intellectual property is referred to as trade secrets.
 - 公司創造的大部分價值不在于版權、專利,甚至商標.有一種知識產權與商業程序、公式、製造方法和服務交付方式有關,公司從中獲得價值,不想以專利申請或版權的形式與他人分享.這種類型的知識產權被稱為商業秘密.
- Trade secrets differ from other copyright and patent protections because they may not be unique or novel. Information in a firm can be considered a trade secret if (a) it is a secret (something that others do not know), (b) has commercial value to its owner, and (c) the owner has taken steps to protect the secret.
 - 商業秘密與其他版權和專利保護不同,因爲它們可能不是唯一的或新穎的.如果(a)信息是一個秘密(其他人不知道的東西),(b)對其所有人具有商業價值,(c)業主已采取步驟保護這一秘密.則該信息可被視爲商業機密.

Comp	parison of Means of Pr	otecting Ideas			
Category	Utility Patents	Design Patents	Trademarks	Copyrights	Trade Secrets
Idea or subject matter	New and useful processes, machines, articles of manufacture, and compositions of matter	New ornamental designs for articles of manufacture	Words, names, sym- bols, or other devices that serve to distinguish goods or services	Writings, music, works of art, and the like that have been reduced to a tangible medium of expression	Almost anything that is secret, substantial, and valuable
Sources of protection	U.S. Patent and Trademark Office patent	U.S. Patent and Trademark Office patent	Registration with the U.S. Patent and Trademark Office	Federal law protects only a tangible medium of expression	Primarily common- law protection through courts
			Registration with the secretary of state	Enforceable only when registered with the copyright office	
			Common-law protec- tion through courts as long as proper use continues		
Terms of protection	20 years from application filing date	14 years from issue date of patent	10 years from registration with federal office; renewable for additional 10-year terms	Life of author, plus 70 years	For as long as it remains a secret
Tests for infringement	Making, using, or selling invention described in patent claim	Making, using, or selling design shown in patent claim	Likelihood of confu- sion, mistake, or deception	Copying of protected subject matter	Taking of trade secre by breach of trust or violation of a confidential relationship

- 1) Which of the following e-commerce technology dimensions creates greater opportunities for cyberbullying?
- A) information density
- B) interactivity
- C) social technology
- D) ubiquity
- 2) Which of the following e-commerce technology dimensions has the potential to reduce cultural diversity in products?
- A) ubiquity
- B) interactivity
- C) information density
- D) global reach
- 3) Downloading a music track owned by a record company without paying for it is an example of a violation of:
- A) patent law
- B) copyright law
- C) trademark law
- D) privacy law

- 4) Which of the following features of e-commerce technology can result in work and shopping invading family life?
- A) interactivity
- B) ubiquity
- C) information density
- D) global reach
- 5) Which of the following tools can companies use to trace user statements and views on newsgroups, chat groups, and other public forums?
- A) cookies
- B) digital wallets
- C) search engines
- D) shopping carts
- 6) _____ can be used to record all keyboard activity of a user.
- A) Shopping carts
- B) Trusted computing environments
- C) Spyware
- D) DRM

7) All of the following are required in order for information to be considered a trade secret except:

- A) it must have commercial value to its owner
- B) the owner must have taken steps to protect it
- C) it must be unique
- D) it must be something that others do not know

8) What is the major reason the Internet has such potential for destroying traditional conceptions and implementations of intellectual property law?

- A) the ability to make perfect copies of digital works at little cost
- B) the anonymous nature of the Internet
- C) the support for instant peer-to-peer communication
- D) the use of standards for file formats

9) _____ protects original forms of expression in a tangible medium.

- A) Trade secret law
- B) Copyright law
- C) Patent law
- D) Trademark law

- 10) _____ allows someone to obtain an exclusive monopoly on the ideas behind an invention for 20 years.
- A) Copyright law
- B) Trade secret law
- C) Patent law
- D) Trademark law
- 11) Registering a domain name similar or identical to trademarks of others to extort profits from legitimate holders is an example of:
- A) cybersquatting
- B) cyberpiracy
- C) framing
- D) metatagging
- 12) Registering a domain name similar or identical to trademarks of others to divert web traffic to their own sites is an example of:
- A) cybersquatting
- B) cyberpiracy
- C) framing
- D) metatagging

1.	List at least 6 common to online and mobile privacy	or eliminating on	lline tracking ar	nd other

2.	Trademark abuse can take many forms on the Web. Lists the six major behaviors on the Internet that have run afoul of trademark law.