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## GLOSSARY

- Access control** A defense mechanism that determines who (person, program, or machine) can legitimately use the organization's computing resources (which resources, when, and how).
- Ad views** The number of times users call up a page that has a banner on it during a specific period; known as *impressions* or *page views*.
- Address Verification System (AVS)** System that detects fraud by comparing the address provided by the buyer at checkout with the address on file.
- Affiliate network** A network created as a marketplace where publishers (affiliates) and merchant affiliate programs can collaborate.
- Affiliated marketing** A type of "performance-based marketing" used mainly as a revenue source for the referring organization and as a marketing tool for the sellers.
- Application controls** Controls that guard applications.
- Augmented reality** "A live, copy, view of a physical, real-world environment whose elements are *augmented* (or supplemented) by computer-generated sensory input such as sound, video, graphics, or GPS data" (see [en.wikipedia.org/wiki/Augmented\\_reality](http://en.wikipedia.org/wiki/Augmented_reality)).
- Authentication** A process to verify (assure) the real identity of an EC entity, which could be an individual, software agent, computer program, or EC website.
- Authorization** The provision of permission to an authenticated person to access systems and perform certain operations in those specific systems; or the first phase of processing a credit card transaction that determines whether a buyer's card is valid (e.g., not expired) and whether the customer has sufficient credit or funds in his or her account.
- Automated question-answer (Q&A)** System used to find answers that match questions asked in a natural language (e.g., English, Chinese).
- Availability** The assurance that access to any relevant data, information websites, or other EC services and their use is available in real time, whenever and wherever needed.
- Back end** Where activities that are related to order aggregation and fulfillment, inventory management, purchasing from suppliers, accounting and finance, insurance, payment processing, packaging, and delivery.
- Banking Trojan** Malicious software programmed to create damage when users visit certain online banking or e-commerce sites.
- Banner** A display that is used for advertising on a Web page (words, logos, etc. embedded in the page).
- Banner exchanges** Marketplaces that allow multiple websites to barter space for banners.
- Banner swapping** Company A agrees to display a banner of company B in exchange for company B's displaying company A's banner.
- Bartering** The exchange of goods and services.
- Bartering exchange** A company submits its surplus to the exchange and receives points of credit, which the company can then use to buy items that it needs. A marketplace where an intermediary arranges barter transactions.
- Behavioral targeting** Targeting that uses consumer browsing behavior information to design personalized ads that may influence consumers better than mass advertising does.
- Biometric** One of an individual's unique physical or behavioral trait that can be used to authenticate an individual precisely (e.g., fingerprints).
- Biometric authentication** A technology that measures and analyzes the identity of people based on measurable biological or behavioral characteristics or physiological signals.
- Biometric systems** A system that can *identify* a previously registered person by searching through a database for a possible *match* based on the person's observed physical, biological, or behavioral traits, or the system can *verify* a person's identity by matching an individual's measured biometric traits against a previously stored version.
- Bitcoin address** An alphanumeric string that identifies the recipient of a Bitcoin transaction.
- Bitcoin private key** Key that is a randomly generated number between 1 and  $2^{256}$  (i.e., 2 raised to the 256th power) that is used by the key's owner to initiate and digitally sign transactions and used by the network to verify those transactions.
- Blockchain** The Bitcoin public ledger containing a complete list of all transactions since the first bitcoin was issued.
- Botnet** Malicious software that criminals distribute, usually to infect a large number of computers.

- Brick-and-mortar (old economy) organizations** Purely physical organizations (corporations) doing business off-line.
- Brick-and-mortar retailer** A retailer that conducts business exclusively in the physical world.
- Business continuity plan** A plan that keeps the business running after a disaster occurs. Each function in the business should have a valid recovery capability plan.
- Business ethics (corporate or enterprise ethics)** A code of values, behaviors, and rules, written or unwritten, for conducting business. These ethics dictate the operations of organizations.
- Business impact analysis (BIA)** An analysis of the impact of losing the functionality of an EC activity (e.g., e-procurement, e-ordering) to an organization.
- Business model** A description of how an organization intends to generate revenue through its business operations.
- Business social network** A network that is built on social relationships, and can exist off-line or online. Business social networking can take place in traditional corporate physical environments.
- Business-oriented social network** A social network whose primary objective is to facilitate business.
- Business-to-business (B2B)** All transactions take place between and among organizations.
- Business-to-business e-commerce (B2BEC)** Transactions between businesses conducted electronically over the Internet, extranets, intranets, or private networks.
- Business-to-business-to-consumer (B2B2C)** A business (B1) sells a product to another business (B2). B2 then sells or gives away the product to individuals who may be B2's own customers or employees.
- Business-to-consumer (B2C)** Retail transactions of products or services from businesses to individual shoppers.
- Business-to-employees (B2E)** The delivery of services, information, or products from organizations to their employees.
- Button** A small banner that is linked to a website; may contain downloadable software.
- Buy-side e-marketplace** An e-marketplace owned by large buyers that invites sellers to browse and offers to fulfill orders. Where a company purchases from many potential suppliers; this type of purchasing is considered to be *many-to-one*, and it is a B2B activity.
- Card verification number (CVN)** Method for detecting fraud by matching the 3-digit verification number printed on the signature strip on the back of the credit card (or the 4-digit number on the front of the card, such as American Express cards) with the number stored by the cardholder's issuing bank.
- Certificate authorities (CAs)** Independent agencies that issue digital certificates or SSL certificates, which are electronic files that uniquely identify individuals and websites and enable encrypted communication.
- Channel conflict** Refers to the case in which online sales damage the well-being of existing channel partner.
- CIA security triad (CIA triad)** A point of reference used to identify problem areas and evaluate the information security of an organization that includes *confidentiality*, *integrity*, and *availability*.
- Ciphertext** An encrypted plaintext.
- Click (ad click)** A count made each time a visitor clicks on an advertising banner to access the advertiser's website.
- Click-and-mortar (click-and-brick) organizations** Organizations that conduct some e-commerce activities, usually as an additional marketing channel.
- Click-and-mortar retailer** A combination of both the traditional retailer and an online store.
- Clickstream behavior** A pattern of customer movements on the Internet, which can be seen in their transaction logs.
- Clickstream data** Data that describe which websites users visit, in what order, and the time spent on each. This is done by tracking the succession of "clicks" each visitor makes.
- Click-through rate/ratio (CTR)** The percentage of visitors who are exposed to a banner ad and click on it.
- Collaboration hub (c-hub)** The central point of interaction and of a company's supply chain. A single e-hub can host multiple *collaboration spaces* in which trading partners trade, collaborate, communicate, and share information.
- Collaborative commerce (c-commerce)** Refers to online activities and communications done by parties working to attain the same goal; or electronic support for business collaboration. It enables companies to collaboratively plan, design, develop, manage, and research products, services, and innovative business processes, including EC applications.
- Collaborative filtering** A method that attempts to predict what products or services are of interest to new customers without asking or viewing their previous records.
- Communal shopping (collaborative shopping)** A method of shopping where shoppers enlist friends and other people they trust to advise them on what products to shop for.
- Company-centric EC** One-to-many and many-to-one markets where one company does either all the selling (*sell-side market*) or all the buying (*buy-side market*).
- Computer Fraud and Abuse Act (CFAA)** Act passed in 1984 and amended several times, is an important milestone in EC legislation. Initially, the scope and intent of CFAA was to protect government computers and financial industry computers from criminal theft by outsiders. In 1986, the CFAA was amended to include stiffer penalties for violations, but it still only protected computers used by the federal government or financial institutions.
- Confidentiality** The assurance of data secrecy and privacy. Namely, the data is disclosed only to authorized people.

- Consortium trading exchange (CTE)** An exchange formed and operated by a group of major companies in one industry. They can be suppliers, buyers, or both.
- Consumer-to-business (C2B)** People use the Internet to sell products or services to individuals and organizations. Alternatively, individuals use C2B to bid on products or services.
- Consumer-to-consumer (C2C)** E-commerce category in which individual consumers sell to or buy from other consumers; or electronic transactions completed between and among individuals.
- Contact card** A smart card that is activated when it is inserted into a smart card reader.
- Contactless (proximity) card** A smart card that only has to be within a certain proximity of a smart card reader to process a transaction.
- Context-aware computing** A technology that is capable in predicting people's needs and providing fulfillment options (sometimes even before a request by the end user is made).
- Conversion rate** The percentage of clickers who actually make a purchase.
- Convertible virtual currency** A virtual currency that has an equivalent value in real currency, or acts as a substitute for real currency.
- Cookie** A data file that, without the knowledge of users, is placed on their computer hard drives.
- Copyright** An exclusive legal right of an author or creator of intellectual property to publish, sell, license, distribute, or use such work in any desired way.
- Copyright infringement** The use of a work without permission or contracting for payment of a royalty.
- Corporate portal** A gateway for customers, employees, and partners to reach corporate information and to communicate with the company.
- Cost-benefit analysis** A comparison of the costs of each project against its benefits.
- CPM (cost per mille, i.e., thousand impressions)** The fee an advertiser pays for each 1000 times a page with a banner ad is shown.
- Cracker** A malicious hacker who may be more damaging than a hacker.
- Cross-border e-commerce** Online purchases involving buyers and merchants or sellers who are in different countries.
- Crowdsourcing** Utilizing crowds to collectively execute tasks such as solving problems, innovating, or getting large projects done by dividing the work among many people.
- Customer relationship management (CRM)** A customer service approach that focuses on building long-term and sustainable customer relationships that adds value for both the customers and the merchants.
- Cybercrime** Intentional crimes carried out on the Internet.
- Cybercriminal** A person who intentionally carries out crimes over the Internet.
- Darknet** A separate Internet that can be accessed via the regular Internet and a connection to the TOR network (TOR is a network of VPNs that allows privacy and security on the Internet). The darknet has restricted access to trusted people (friends) by using non-standard protocols (IP addresses are not listed). Darknet allows anonymous surfing.
- Data breach** A security incident in which data are obtained illegally and then published or processed.
- Denial-of-service (DoS) attack** "A malicious attempt to make a server or network resource unavailable to users, usually by temporarily interrupting or suspending the services of a host connected to the Internet." (Incapsula, Inc.)
- Desktop purchasing** Purchasing done by employees without the approval of supervisors and without the involvement of a procurement department.
- Desktop search** The search of a user's own computer files. The search is done by looking through all the information that is available on the user's PC.
- Detection measures** Methods that help find security breaches in computer systems. Usually this means to find out whether intruders are attempting (or have attempted) to break into the EC system, whether they were successful, whether they are still damaging the system, and what damage they may have done.
- Deterrent methods** Countermeasures that make criminals abandon their idea of attacking a specific system (e.g., a possible deterrent is a realistic expectation of being caught and punished).
- Digital currency** A generic term that refers to the digital representation of either e-money or virtual currency.
- Digital economy** An economy that is based on online transactions, mostly e-commerce. Also called the *Internet economy*.
- Digital enterprise** A new business model that uses IT to gain competitive advantage by increasing employee productivity, by improving efficiency and effectiveness of business processes, and by better interactivity between vendors and customers.
- Digital products** Goods that can be transformed to digital format.
- Digital rights management (DRM)** A system of protecting the copyrights of data circulated over the Internet or digital media. These arrangements are technology-based protection measures (via encryption or using watermarks).
- Digital signatures** The electronic equivalent of personal signatures on paper. They are difficult to forge since they authenticate the identity of the sender that uses the public key.

- Direct marketing** Describes marketing that takes place without physical stores. Selling takes place directly from manufacturer to customer.
- Direct materials** Materials used in making products, such as steel in a car or paper in a book.
- Discount rate** The main fee that a merchant pays for offering credit card payments.
- Disintermediation** Elimination of intermediaries between sellers and buyers because they offer only services that can be fully automated; or are responsible for certain activities (usually in a supply chain) between trading partners.
- Distance learning** Education conducted from home or other place, anytime.
- Double auction** An auction in which multiple buyers and their bidding prices are matched with multiple sellers and their asking prices, considering the quantities on both sides.
- Dynamic pricing** Prices that are not fixed but that are allowed to fluctuate, and are determined by supply and demand.
- E-bartering (electronic bartering)** Bartering conducted online, usually in a bartering exchange.
- E-business** A broader definition of EC, not just the buying and selling of goods and services, but conducting all kinds of business online such as servicing customers, collaborating with business partners, delivering e-learning, and conducting electronic transactions within an organization.
- EC security strategy** Multiple layers of defense that includes several methods. This defense aims to deter, prevent, and detect unauthorized entry into an organization's computer and information systems.
- E-collaboration** The use of digital technologies among people for accomplishing a common task.
- E-distributor** An entity that basically aggregates product information from many manufacturers, sometimes thousands of them, in the e-distributor's catalog.
- E-government** The use of information technology in general, and e-commerce in particular, to improve the delivery of government services and activities in the public sector, such as providing citizens and organizations with more convenient access to government information and services, and to providing effective delivery of public services to engage citizens and businesses partners, as well as improving the performance of government employees. Governments can deal also with other governments (G2G).
- E-grocer** A grocer that takes orders online and provides deliveries on a daily or other regular schedule or within a very short period of time, sometimes within an hour.
- E-health** The transfer of health resources and health care by electronic means.
- E-learning** The online delivery of educational materials and methods using information technologies, for the purposes of learning, teaching, training, or gaining knowledge at any time, and at many different locations.
- Electronic (online) banking or e-banking** Conducting banking activities online.
- Electronic auction (e-auction)** An auction conducted online.
- Electronic book (e-book)** A book in digital format that can be read on a computer screen, including mobile devices (e.g., a tablet, iPhone), or on a dedicated device known as an *e-reader*.
- Electronic catalog (e-catalog)** The presentation of product information in electronic form; the backbone of most e-selling sites.
- Electronic commerce (EC)** Using the Internet and intranets to purchase, sell, transport, or trade data, goods, or services.
- Electronic market (e-marketplace)** An online location where buyers and sellers conduct commercial transactions such as selling goods, services, or information.
- Electronic money** Abbreviated e-money, it is a digital representation of fiat currency used for purposes of electronic transfer.
- Electronic retailing (e-tailing)** Retailing conducted over the Internet.
- Electronic shopping cart** Software that allows customers to accumulate items they wish to buy before they arrange payment and check out.
- Electronic signature** "The electronic equivalent of a handwritten signature" (per [pcmag.com/encyclopedia/term/42500/electronic-signature](http://pcmag.com/encyclopedia/term/42500/electronic-signature)).
- E-mail advertising** Ads are attached to e-mails.
- E-mail marketing** The use of e-mail for sending commercial messages to users.
- E-mail spam** Occurs when almost identical messages are e-mailed to many recipients (sometimes millions of unsolicited e-mails).
- E-mall (online mall)** An online shopping center where many online stores present their catalogs.
- E-marketplace** An electronic space where sellers and buyers meet and conduct different types of transactions.
- Encryption** The process of encoding data into a form (called a *ciphertext*) that will be difficult, expensive, or time-consuming for an unauthorized person to understand.
- Encryption algorithm** The set of procedures or mathematical algorithms used to encrypt or decrypt a message.
- Enterprise 2.0** "The use of social software platforms within companies, or between companies and their partners or customers." McAfee (2009)
- Enterprise mobility** The people and technology (e.g., devices and networks) that enable mobile computing applications within the enterprise.
- Enterprise search** The search for information *within* the files and databases of an organization.
- E-procurement (electronic procurement)** The online purchase of supplies, materials, energy, work, and services. It

- can be done via the Internet or via a private network such as EDI.
- E-tailers** Sellers who conduct retail business online.
- E-tailing** Online retailing, usually B2C.
- Ethics** A set of moral principles or rules of how people are expected to conduct themselves. It specifies what is considered by society to be right or wrong.
- Event shopping** The B2C model in which sales are designed to meet the needs of special events (e.g., a wedding, Black Friday). This model may be combined with group purchasing (to lower the customers' cost).
- Exchanges (trading communities or trading exchanges)** Many-to-many e-marketplaces where many buyers and many sellers meet electronically to trade with one another.
- Expert/expertise location systems (ELS)** Interactive computerized systems that help employees locate experts within their organization in order to get help in solving specific, critical business or technical problems in a short time.
- Exposure** The estimated cost, loss, or damage that can result if a threat exploits a vulnerability.
- Extranet** A network that uses Internet technology to link intranets of several organizations in a secure manner.
- Fair use** The limited use of copyrighted material, without paying a fee or royalty, for certain purposes (e.g., reviews, commentaries, teaching).
- F-commerce** Rapidly increasing commercial activities conducted on or facilitated by Facebook.
- Fiat currency** The coin and paper money of a country that is designated as legal tender.
- Firewalls** Barriers between an internal trusted network (or a PC) and the untrustworthy Internet. Technically, it is composed of hardware and a software package that separates a private computer network (e.g., your LAN) from a public network (the Internet).
- Forward auction** An auction where a seller entertains bids from multiple buyers.
- Fraud** Any business activity that uses deceitful practices or devices to deprive another of property or other rights.
- Front end** The place where customers interact with a marketplace. The major components of the front end can include the seller's portal, electronic catalogs, a shopping cart, a search engine, an auction engine, a payment gateway, and all other activities related to placing orders.
- Gamification** Virtual games designed to support B2B training and decision-making; or the introduction of gaming into social networking. Gamification can also be viewed as the introduction of social networking activities into online games.
- General controls** Controls designed to protect all system applications.
- Geosocial networking** Social networking with location awareness capabilities. This enables social networks to connect users with local businesses, people, or events.
- Government 2.0** The employment of social media tools, new business models, and embracing social networks and user participation, government agencies can raise the effectiveness of their online activities to meet users' needs at a reasonable cost.
- Government-to-employees (G2E)** E-government category that includes activities between the government and their employees.
- Government-to-government (G2G)** E-government category that includes EC activities between different units of governments, including those within one governmental body. Many of these are aimed at improving the effectiveness and the efficiency of the government operation.
- Government-to-business (G2B)** E-government category that works both ways: government-to-business and business-to-government. Thus, G2B refers to activities where the government sells products to businesses or provides businesses with services and vice versa.
- Government-to-citizens (G2C)** E-government category that includes all the interactions between a government and its citizens that take place electronically.
- Group purchasing** Orders from several buyers are aggregated so that better prices due to larger quantities purchased can be negotiated.
- Hacker** Someone who gains unauthorized access to a computer system.
- Hit** A request for data from a Web page or file.
- Horizontal marketplaces** Markets in which trading is in a service or a product that is used in many types of industries. Examples are office supplies, PCs, or travel services.
- Identity theft** Wrongfully obtaining and using the identity of another person in some way to commit crimes that involve fraud or deception (e.g., for economic gain).
- Indirect materials** Items, such as office supplies or light bulbs, which support operation and production.
- Information assurance (IA)** The performance of activities (steps) to protect information systems and their processes against all risks. The assurance includes all tools and defense methods.
- Information security** Measures taken to protect information systems and their processes against all risks.
- Integrity** The assurance that data are accurate and that they cannot be altered.
- Intellectual property (IP)** Property that derives from the creative work of an individual, such as literary or artistic work.
- Intellectual property law** Area of the law concerned with the regulation of thinking-related products, including creativity that are protected by patents, copyrights, trademarks, and trade secret law.
- Intelligent personal assistants** An application that uses AI to understand spoken natural languages.
- Interactive marketing** A marketing concept that enables marketers and advertisers to interact directly with customers.

- Interactive video** A technique used to mix user interaction with videos.
- Interactive voice response (IVR)** A voice support application system that enables users to interact by telephone (of any kind) with a computerized system to request and receive information.
- Interchange rate** The fees charged by the issuing bank for handling authorization and settlement requests.
- Intermediary** A third party that operates between sellers and buyers.
- Internet of Things (IoT)** A situation where many objects (people, animals, items) with embedded microprocessors are connected mostly wirelessly to the Internet.
- Internet Radio** Audio content transmitted live via the Internet.
- Internet TV** The delivery of TV content via the Internet by video streaming technologies.
- Internet underground economy** E-markets for stolen information made up of thousands of websites that sell credit card numbers, social security numbers, e-mail addresses, bank account numbers, social network IDs, passwords, and much more.
- Intrabusiness EC** E-commerce category that refers to EC transactions among various organizational departments and individuals.
- Intranet** An internal corporate or government network that uses Internet tools, such as Web browsers, and Internet protocols.
- Intrusion detection system (IDS)** A device composed of software and/or hardware designed to monitor the activities of computer networks and computer systems in order to detect and define unauthorized and malicious attempts to access, manipulate, and/or disable these networks and systems.
- Key (key value)** The secret piece used with the algorithm to encrypt (or decrypt) the message.
- Key performance indicator (KPI)** A quantifiable measurement that is considered a critical success factor of a company, department, or project.
- Keystroke logging (keylogging)** The process of using a device or software program that tracks and records the activity of a user in real time (without the user's knowledge or consent) by the keyboard keys they press.
- Knowledge management (KM)** The process of capturing or creating knowledge, storing it, updating it constantly, disseminating it, and using it whenever necessary.
- Landing page** The page a viewer is directed to after having clicked on a link. In online marketing, this page is used to convert the person from a viewer to a buyer.
- Learning management system (LMS)** Software applications for managing e-training and e-learning programs including content, scheduling, delivery tips, and so forth.
- Live banners** Ads where the content can be created or modified at the time the ads pop up instead of being pre-programmed like banner ads.
- Localization** The transformation and adaptation of Web content media products and advertising materials to fit the Web environment of a certain region or country.
- Location-based commerce (l-commerce)** A wireless-based technology used by vendors to send advertisements relevant to the location where customers are at a given time by using GPS.
- Macro virus (macro worm)** A malware code that is attached to a data file rather than to an executable program (e.g., a Word file).
- Maintenance, repair, and operation (MRO)** Indirect materials used in activities that support production.
- Malware (malicious software)** A generic term for malicious software.
- Maverick buying** A buying situation that occurs when a buyer makes unplanned purchases of items needed quickly, resulting in buying at non-pre-negotiated, and usually higher, prices.
- Merge-in-transit** Logistics model in which components for a product may come from two (or more) different physical locations and are shipped directly to the customer's location.
- Micropayments (e-micropayments)** Small online payments, usually under \$10.
- M-learning (mobile learning)** Refers to e-learning or other forms of education using mobile devices.
- Mobile (digital) wallet** Proximity payments that are debited to a mobile phone account as a monthly fee or to a debit card account. The technology enables payments as well as processing loyalty programs and performing target promotions all in one mobile device.
- Mobile advertising (m-advertising)** "Advertising tailored to and delivered through wireless mobile devices such as smartphones (e.g., Blackberry, iPhone, Android, etc.), feature phones (e.g., lower-end mobile phones capable of accessing mobile content), and media tablets (e.g., iPad, Samsung Galaxy Tablet, etc.)" (IAB 2014).
- Mobile app** A software application developed specifically for use on small, wireless computing devices, such as smartphones and tablets, rather than desktop or laptop computers.
- Mobile banking (m-banking)** A term used to describe the conducting of banking activities via a mobile device (mostly by texting, or via mobile website).
- Mobile commerce (m-commerce; m-business)** Conducting e-commerce by using mobile devices and wireless networks.
- Mobile enterprise** Mobile applications conducted by enterprises to improve the operations of the employees, facilities,

- and relevant supply chains, within the enterprise and with its business partners.
- Mobile entertainment** Any entertainment delivered on mobile devices over wireless networks or that interacts with mobile service providers.
- Mobile government (m-government)** The implementation of e-government applications using wireless platforms.
- Mobile marketing** The use of mobile devices and wireless infrastructure as a means of marketing and advertising.
- Mobile payment** Payment transactions initiated or confirmed using a person's mobile device, usually a smartphone.
- Mobile portal** A portal accessible via a mobile device.
- Mobile social networking** Social networking where members converse and connect with one another using any mobile device.
- Mobile worker** Any employee who is away from his or her primary work space at least 10 h a week (or 25% of the time).
- Multichannel business model** The model or strategy of selling both online and off-line.
- Multimedia messaging service (MMS)** The new type of wireless messaging, delivering rich media content, such as video, images, and audio to mobile devices. MMS is an extension of SMS (no extra charge with an SMS "bundle"). It allows for longer messages than with SMS.
- Name-your-own-price model** Auction model in which a would-be buyer specifies the price (and other terms) he or she is willing to pay to any willing and able seller. It is a C2B model that was pioneered by Priceline.com.
- Non-convertible virtual currency** A virtual currency used in a specific virtual world or domain that cannot (theoretically) be exchanged for fiat currency.
- Nonrepudiation** The assurance that online customers or trading partners cannot falsely deny (repudiate) their purchase, transaction, sale, or other obligation.
- On-demand delivery service** An express delivery option.
- Online intermediary** A third-party entity that brokers the transactions between the buyer and seller and can be either a virtual or a click-and-mortar intermediary.
- Opt-in** The principle that consumers must approve, in advance, what they are willing to see. That is, information sharing should not occur unless customers affirmatively allow or request it.
- Opt-out** A method that gives consumers the choice to refuse to share information about themselves, or to avoid receiving unsolicited information.
- Order fulfillment** All the operations a company undertakes from the time it receives an order to the time the items are delivered to the customers, including all related customer services.
- Patent** "An exclusive right to a particular invention. Patents are granted by states or governments to the creator of an invention, or to someone who has been designated by them to accept the rights over the invention. The holder of the patent has sole rights over the invention for a specified period of time." (per Fedcirc.us)
- Pay per click (PPC)** A popular Internet advertising payment formula where advertisers pay sites only when someone clicks on their ad.
- Payment cards** Electronic cards that contain payment-related data. They include credit cards, charge cards, and debit cards.
- Penetration test (pen test)** A method of assessing the vulnerability of a computer system, which is done by allowing experts to act as malicious attackers.
- Penny auction** A new type of forward auction in which participants must pay a small nonrefundable fee each time they place a bid (usually in small increments above the previous bid). When time expires, the last participant to have placed a bid wins the item and also pays the final bid price.
- Permission advertising** Advertising (marketing) strategy in which customers agree to accept advertising and marketing materials (known as *opt-in*).
- Personalization** The matching of advertising content and vendors' services with customers based on their preferences and individual needs.
- Personalized banners** Banners that are tailored to meet the need of target customers.
- Pervasive computing** Computing capabilities that are embedded in the environment but typically are not mobile.
- Phishing** A fraudulent process of attempting to acquire sensitive information by masquerading as a trustworthy entity.
- Plaintext** A human-readable text or message.
- Platform for Privacy Preferences Project (P3P)** A protocol for privacy protection on the Web developed by the W3 Organization (W3C).
- Pop-up ad** An ad that appears due to the automatic launching of a new browser window when a visitor accesses or leaves a website, when a delay occurs; also known as *ad spawning*.
- Pop-up banner** Banners that appear in a separate window when its affiliated Web page is activated.
- Prevention measures** Ways to help stop unauthorized people from accessing the EC system (e.g., by using authentication devices and firewalls or by using *intrusion prevention* which is, according to TechTarget, "a preemptive approach to network security used to identify potential threats and respond to them swiftly").
- Private key** A key that only its owner knows.
- Private shopping club** Enables members to shop at discount, frequently for short periods of time (just few days).
- Procurement management** The process of planning, organizing, and coordinating of all the activities pertaining to the purchasing of the goods and services needed by an organization.

- Public (asymmetric) key encryption** An encryption method that uses two keys: public key and private key.
- Public e-marketplaces** Third-party exchanges open to all interested parties (sellers and buyers).
- Public key** A key that is known to all.
- Public key infrastructure (PKI)** A comprehensive framework for securing data flow and information exchange that overcomes some of the shortcomings of the one-key system.
- Radio frequency identification (RFID)** A short-range radio frequency communication technology for wirelessly identifying and tracking tags attached to objects.
- Random banners** Banner ads that appear randomly, not as a result of some action by the user.
- Reintermediation** The new intermediation that provides valuable help services.
- Request for quote (RFQ)** A form or document used as an “invitation” to take part in a reverse auction.
- Reverse auction (bidding or tendering system)** Auction in which the buyer places an item for bid (tender) on a request for quote (RFQ) system, potential suppliers bid on the job, with the price reducing sequentially, and the lowest bid wins; primarily a B2B or G2B mechanism.
- Risk** The probability that a vulnerability will be known and used.
- Search advertising** Placing online ads on Web pages that show results from querying a search engine.
- Search engine** A computer program that can access databases of Internet resources, search for specific information or keywords, and report the results.
- Search engine optimization (SEO)** A process that improves the position of a company or brands on the results page displayed by a search engine. Ideally, the results should be in the top five on the first page of the results.
- Search engine spam** The technology that enables the creation of spam sites.
- Sell-side e-marketplace** A place where a company sells either standard or customized products to individuals (B2C) or to businesses (B2B); this type of selling is considered to be one-to-many. In this model a business sells products and services to business customers electronically, frequently over an extranet.
- Semantic Web** A group of methods that focuses on machines (in contrast with Web 2.0 that focuses on people), trying to enable machines to understand the semantics (i.e., the meaning) of information using natural language understanding tools.
- Sharing economy** An economic system constructed around the concept of sharing goods and services among the participating people.
- Shopping portals** Gateways to webstores and e-malls.
- Shopping robots (shopping agents or shopbots)** Search engines that look for the lowest prices or for other search criteria.
- Short message service (SMS)** A service that supports the transmittal of short text messages (up to 140–160 characters) between wireless devices.
- Smart card** A plastic payment card that contains data in an embedded microchip.
- Smart card reader** A read/write device that acts as a mediator between the card and the host system that stores application data and processes transactions.
- Smart grid** An electricity network managed by utilizing digital technology.
- Smartphone** A mobile phone with Internet access and PC-like functionality.
- Smartwatch** A computerized wrist watch with functionality that is enhanced beyond timekeeping. Today, smartwatches are wearable computers. Many run mobile apps, using a mobile operating system.
- Social (digital) customers** Members of social networks who share opinions about products, services, and vendors, do online social shopping, and understand their rights and how to use the wisdom and power of social communities to their benefit.
- Social business** “An organization that has put in place the strategies, technologies and processes to systematically engage all the individuals of its ecosystem (employees, customers, partners, suppliers) to maximize the co-created value.” (Social Business Forum). Or “A business that embraces networks of people to create business value.” (IBM 2011). Or a name for a profit or nonprofit organization that is designed to achieve some social goal(s) rather than just make profit.
- Social collaboration (Collaboration 2.0)** People’s collaboration within and between communities enabled by social media tools and platforms. The process where people, individually or in groups, interact and share information and knowledge while in social networks, or when pursuing social goals.
- Social commerce (SC)** The e-commerce activities conducted in social networks by using social software.
- Social computing** Computing systems that involve social interactions and behavior.
- Social customer relationship management (SCRM, CRM 2.0)** The delivery of CRM by using social media tools and platforms.
- Social customers** Customers who usually are members in social networks, do social shopping, and understand their shopper’s rights and how to use them to their advantage.
- Social engineering** A type of nontechnical attack that uses some ruse to trick users into revealing information or performing an action that compromises a computer or network.
- Social enterprise** These organizations embrace the main goal of focusing on social issues. The enterprises generate revenue. The profits do not go to owners and shareholders, but are put back into the company and used toward building positive social change. The use of social media

- tools and platforms and conducting social networking in organizations while the major objectives are either commercial or nonprofit activities (e.g., the government).
- Social game** A video multiplayer game played on the Internet, mostly in social networks or virtual worlds.
- Social learning** Learning, training, and knowledge sharing in social networks and/or facilitated by social software tools.
- Social marketplace** A marketplace that uses social media tools and platforms and acts as an online intermediary between buyers and sellers.
- Social media** Involves user-generated online text, image, audio, and video content that are delivered via Web 2.0 platforms and tools. The media is used primarily for social interactions and conversations such as to share opinions, experiences, insights, and perceptions and to collaborate, all online.
- Social media marketing (SMM)** The application of marketing communication and other marketing tools using social media.
- Social network** A social entity composed of nodes (which are generally individuals, groups, or organizations) that are connected by links such as hobbies, friendship, or profession. The structures are often very complex.
- Social network game** A video game that is played in social networks, and usually involves multiplayer.
- Social networking** The execution of any Web 2.0 activity, such as blogging or having a presence in a social network. It also includes all activities conducted in social networks.
- Social networking service (SNS)** A service that builds online communities by providing an online space for people to build free homepages and that provides basic communication and support tools for conducting different activities in the social network.
- Social shopping (sales 2.0)** Online shopping with social media tools and platforms. It is about sharing shopping experiences with friends. Social shopping is the combination of social media and e-commerce.
- Social TV** An emerging social media technology that enables several TV viewers who are in different locations to interactively share experiences such as discussions, reviews, and recommendations while watching the same show simultaneously.
- Spam** The electronic equivalent of junk mail.
- Spam site** Pages that trick search engines into offering biased search results so that the ranking of certain pages is inflated.
- Splog** Blogs created by spammers solely for advertising.
- Spyware** Tracking software that is installed by criminals or advertisers, without the user's consent, in order to gather information about the user and direct it to advertisers or other third parties. A tool that some merchants use to gather information about users without their knowledge.
- Standard of due care** The minimum and customary practice that a company is reasonably expected to take to protect the company and its resources from possible risks.
- Static banner** Banners that stay on a Web page regularly.
- Stored-value card** A card where a monetary value is pre-paid and can be loaded on the card once, or several times.
- Symmetric (private) key encryption** A scheme in which the same key is used to encrypt and decrypt the plaintext.
- Tendering (bidding) system** System through which large organizational buyers make large-volume or large-value purchases (also known as a *reverse auction*).
- Third-party logistics suppliers (3PL)** External, rather than in-house, providers of logistics services.
- Transaction log (for Web applications)** A user file that records the user's activities on a company's website from the computer log.
- Trojan horse** A program that seems to be harmless or even looks useful but actually contains a hidden malicious code.
- Ubiquitous computing (ubicom)** Computing capabilities embedded into a relevant system, usually not visible, which may be mobile or stationary.
- User profile** Customer preferences, behaviors, and demographics.
- Value proposition** Refers to the benefits, including the intangible ones that a company hopes to derive from using its business model.
- Vendor-managed inventory (VMI)** A process in which retailers make their suppliers responsible for monitoring the inventory of each item they supply, and determining when to order each item.
- Vertical marketplaces** Markets for one industry or one industry segment. Examples include marketplaces specializing in electronics, cars, hospital supplies, steel, or chemicals.
- Viral blogging** Viral marketing done by bloggers.
- Viral marketing** Word-of-mouth (WOM) method by which people tell others (frequently their friends) about a product they like (or dislike). Electronic word-of-mouth marketing (WOM) that spreads a word, story, or some media.
- Viral video** Any video that is forwarded from a person to others, sometimes with a recommendation to watch it. This way, people share videos that receive more attention, sometimes drawing millions of viewers in a short time.
- Virtual (pure-play) e-tailers** Companies with direct online sales that do not need physical stores.
- Virtual (pure-play) organizations** Organizations that conduct their business activities solely online.
- Virtual community** A community where the interaction takes place over a computer network, mainly the Internet.
- Virtual currency** The digital representation of value that can be digitally traded and functions as a medium of exchange, a unit of account, and a store of value but does not have legal status in any jurisdiction.

- Virtual economy** An emerging economy existing in several virtual worlds, where people exchange virtual goods frequently related to an Internet game or to a virtual business.
- Virtual goods** Computer images of real or imaginary goods.
- Virtual private network (VPN)** A network that uses the Internet to transfer information in a secure manner.
- Virtual reality** A computer-generated simulation of a real-life environment in which users can be immersed.
- Virtual trade show** Temporary or permanent showplaces where exhibitors present their new products to potential customers.
- Virtual university** Online universities where students take classes from home via the Internet.
- Virtual world** A 3-D computer-based simulated environment built and owned by its residents. In addition to creating buildings, people can create and share cars, clothes, and many other items. Community members inhabit virtual spaces and interact and socialize via *avatars*.
- Virus** Programmed software inserted by criminals into a computer to damage the system; running the infected host program activates the virus.
- Voice portal** A portal with audio interfaces that can be accessed by telephone or cell phone.
- Vulnerability** Weakness in software or other mechanism that threatens the confidentiality, integrity, or availability of an asset (recall the CIA model). It can be directly used by a hacker to gain access to a system or network.
- Vulnerability assessment** A process of identifying and evaluating problem areas that are vulnerable to attack on a computerized system.
- Warehouse management system (WMS)** A software system that helps in managing warehouses.
- Web (information) portal** A single point of access, through a Web browser, to critical business information located inside and outside organizations.
- Web 2.0** The second generation of Internet-based tools and services that enables users to easily generate content, share media, and communicate and collaborate, in innovative ways.
- Web 3.0** A term used to describe the future of the World Wide Web. It is projected to deliver a new generation of business applications that will see business and social computing converge.
- Web 4.0** The Web generation after Web 3.0. It is still an unknown entity. However, it is envisioned as being based on islands of intelligence and as being ubiquitous.
- Web analytics** “The measurement, collection, analysis, and reporting of Internet data for the purposes of understanding and optimizing Web usage.” (per Web Analytics Association)
- Web bugs** Tiny (usually invisible) objects concealed in a Web page or in e-mail messages. Web bugs transmit information about the user and his or her movements to a monitoring site (e.g., to find out if the user has viewed certain content on the web page).
- Web mining** The use of data mining techniques for both Web content and usage in Web documents in order to discover patterns and hidden relationships.
- Webstore (storefront)** A single company’s (or individual seller’s) website where products or services are sold.
- Wireless mobile computing (mobile computing)** A computing solution where computing is done using mobile devices at any place connected to a wireless network.
- Worm** A software code that can replicate itself automatically (as a “standalone”—without any human intervention). Worms use networks to propagate and infect a computer or handheld device and can even spread via instant messages.
- Zombies** Computers infected with malware that are under the control of a spammer, hacker, or other criminal.

# INDEX

## A

Access control, 314  
Activity based filtering, 266  
Activity tracker, 189  
Actual buying behavior, 263  
Ad spawning, 274  
Additional customer services, 168  
Address Verification System (AVS), 341  
Administrative controls, 318  
Ads as a commodity, 283  
AdSelector, 284  
Advertising cycle, 271  
Advertising media, 272  
Advertising plans, 285  
Affiliate marketing, 283  
Affiliate network, 283  
Alibaba Group, 101  
Alipay Cross-Border E-Payment Service, 102  
Amazon, 67  
    business, 110  
    distribution center network, 362  
    fulfillment center, 361  
    innovations, 68  
    Mechanical Turk, 248  
    problem, 67–68  
    reaching out to customers, 68  
Android Pay, 351  
Anonymity, 356  
Anti-money laundering and countering the financing of terrorism (AML/CFT), 353  
Apple's iPhone and iPad, 179  
Apple's iTunes music store, 345  
Application controls, 317  
Assemble-to-Order (ATO), 360  
ATM business, 335  
Attacking information systems, 297  
Attitude-behavior decision process, 263  
Auction culture, 48  
Auditing, 302  
Augmented computing, 182  
Augmented reality (AR), 55  
    applications, 280  
    chat rooms, 280  
    and crowdsourcing, 60  
Authentication, 302, 303, 312, 314, 321  
Authorization, 302, 312  
Automated blog spam, 311  
Automated Clearing House (ACH) transactions, 82  
Availability, 302, 312

## B

Back-office operations, 359  
Bandwagon effect, 209  
Bandwidth, 294  
Bangladesh Central Bank computer systems, 301  
BankWest of South Dakota, 328  
Banner advertising, 273  
Banner exchanges, 273  
Banner swapping, 273  
Bartering, 49, 118  
Behavioral marketing, 266  
Best Buy, 89–90  
Better Business Bureau (BBB), 320  
Bidding fee auction, 48  
Billpoint, 348  
Biometric, 270  
Biometric authentication, 314  
Biometric systems, 315  
Bitcoin, 357  
    address, 356  
    advantages, 356  
    associated QR code, 356  
    blockchain, 355  
    disadvantages, 356  
    ecosystem, 355  
    miners, 355  
    mining pools, 356  
    network latency and scalability, 358  
    origin, 354  
    private key, 356  
    simplifies financial transactions, 357  
    support cross-border commerce, 357  
    transactions, 355  
    unit of account, 355  
    valuation, 358  
Biznik, 239  
Blackboard Inc., 149  
Blink by Groupon, 231  
Blockchain, 355  
Blue Nile case, 88, 91  
Botnets, 306  
Branas Isaf's, 117  
Brick-and-mortar (old economy) organizations, 7, 18, 29  
Brick-and-mortar retailer, 73  
"Bring your own device" (BYOD), 191, 193, 296  
Broker, 43  
BtoB's Interactive Marketing Guide, 125  
Build-to-Order (BTO), 360  
Bullwhip effect, 363

- Business Case Resource Kit, 386
- Business continuity plan, 299
- Business ethics, 395–396
- Business impact analysis (BIA), 323
- Business models, 10–15, 17, 20–25, 28–30
- Business networks, 237
- Business partners, 323
- Business process management (BPM) software, 369
- Business social networks, 237–238
- Business-oriented public social networking, 52, 238–239
- Business-oriented spam, 296
- Business-to-business (B2B), 7, 8, 10, 11, 24, 26–28, 31
  - applications, 123
  - auction, 111
  - and B2C EC systems, 369
  - characteristics, 107
  - commerce, 105
  - exchange, 119, 120
  - field, 105
  - marketing, 109
  - social networking, 124
  - transaction activity, 104
  - Twitter, 125
  - operation, 101
- Business-to-business e-commerce (B2B EC), 104
  - Alibaba Group, 101
  - benefits, 108
  - components and role, 102
  - distributors, 109
  - Indirect materials, 107
- Business-to-consumer (B2C), 7, 8, 10, 11, 23, 24, 26–28, 30
  - EC model, 40
  - e-commerce, 70
  - electronic retailing, 69–71, 74
  - m-commerce, 177
  - social shopping, 74
- Business-to-employee (B2E), 9, 10, 26, 28
- Buy at buyer's own website, 114
- Buy at sellers' store, 114
- Buy-side e-marketplaces, 112
- Buzzillions, 213, 214
  
- C**
- Car rental industry, 167
- Card companies, 344
- Card verification number (CVN) method, 341
- CarPlay system, 179
- Cars possess sensor systems, 188
- Cash on delivery (COD), 336
- C-commerce adaptation, 129
- Cell phone ringtones, 345
- Cell phone scams, 328
- CEMEX, 235–239, 255
- Certificate authorities (CAs), 316
- Chaordix Corp., 247
- Children's Internet Protection Act (CIPA), 400
- Children's Online Privacy Protection Act (COPPA), 399
- China digital payments, 336
- Chinese online B2C market, 334
- CIA security triad, 312
- Ciphertext, 315
- Cisco survey, 278
- Cisco WebEx Meeting Center, 251, 252
- Classified ads, 273
- Click-and-mortar retailers, 73
- Clickstream behavior, 269
- Clickstream data, 269
- Click-through rate/ratio (CTR), 272
- Closed-loop cards, 343
- Closed-loop payment applications, 352
- Cloud computing, 102
- Cloud-based mobile wallets, 351
- CloudShopper, 213
- Cognos, 142
- Collaboration 2.0, 250–251
- Collaboration hub, 126
- Collaborative commerce (c-commerce), 9, 10, 26, 28, 105, 125
- Collaborative consumption, 216
- Collaborative filtering, 265, 266
- Collaborative shopping, 209
- Combi cards, 343
- Commerce for every device, 351
- Commercial (public) portals, 43
- Common vulnerabilities and exposures (CVE), 302
- Communal shopping, 209
- Community portals, 43
- Company-centric EC, 104
- Compass group, 137–138
- Competitive environment, 262
- Computer Fraud and Abuse Act (CFAA), 320
- Computer Games for Training Employees, 148
- Computer robot, 306
- Computer security, 294
- Computerize medical data, 297
- Confidentiality, 312
- Consortium, 121
- Consortium trading exchange (CTE), 122
- Consumer and seller protection, online fraud, 319, 320
- Consumer purchasing behavior, 263
- Consumer reports online, 87
- Consumer-to-business (C2B), 8
- Consumer-to-consumer (C2C), 9, 27, 28, 102
  - activities in social networks, 158
  - applications, 157–158
  - auction markets, 157–158, 347
  - EC, 157
  - selling and buying, 158
- Contact card, 342
- Contactless (proximity) card, 342
- Contactless payments, 350
- Content based filtering, 266
- Context-aware computing, 182
- Convertible virtual currency, 354
- Cookies, 401
- Cookies and Web bugs, 269
- Copyright, 397
- Copyrighted material, 302
- Corporate buyers, 112
- Corporate espionage, 297
- Corporate portal, 18, 43
- Coshopping, 211
- Cost reduction, 127
- Cost-benefit analysis, 385
- Course management system, 149
- Cracker, 301
- Craigslist, 52, 53, 79, 215
- Credit card, 338, 339, 346
  - companies, 343
  - networks, 339
  - numbers, 48
  - payment, 339, 340, 346

- Credit-based transportation card, 350
  - Criminals and methods, 301
  - Crowdfunding
    - examples, 249
    - and Kickstarter, 249
    - tools for, 249
  - Crowdsortium, 247
  - Crowdsourcing, 55, 56, 240, 247–248
    - Amazon mechanical turk, 248
    - benefits, 57
    - Dell's IdeaStorm, 248
    - E-Commerce, 57
    - elements, 56
    - Facebook, 248
    - Frito-Lay, 248
    - Goldcorp, 248
    - marketplace, 249
    - models, 247–248
    - process, 56, 248
    - Procter and Gamble, 248
    - shopping advice, 213
    - systems, 248–249
    - tools for, 249
    - Wikipedia, 248
  - Cryptocurrencies, 354
  - Cryptolocker, 306
  - CSX Technology, 369
  - Customer acquisition and retention, 262
  - Customer data, 36
  - Customer order history, 341
  - Customer relationship management (CRM), 222
  - Customer services, 42
  - Customer shopping mechanisms
    - electronic malls, 42
    - microsite, 42
    - webstore, 41
  - Customer-facing activities, 359
  - Cyber bank robberies, 310
  - Cyberattackers, 298
  - Cyberattacks, 297, 310
  - Cyberbanking, 94
  - CyberCop Portal, 295
  - Cybercrime, 299, 301
  - Cybercriminals, 299, 328–329
  - Cyberespionage, 296, 297
  - Cybergang, 296
  - Cyberhooliganism, 296
  - “Cyber Pearl Harbor” attack, 297
  - CyberSource surveys, 341
  - Cyberterrorism, 296
  - Cybervandalism, 296
  - Cyberwarfare, 296
  - Cyberwars, 296, 297, 318
- D**
- DaBus, 143
  - Darknet, 298
  - Data breach, 311
  - DDOS Attacks on WordPress, 305
  - Deal purchases, 211
  - Debit cards, 336
  - Decentralized virtual currency, 354
  - Defending information systems, 314, 315
    - access control, encryption, and PKI, 314–316
    - business continuity and disaster recovery, 318, 319
    - controls, spam, pop ups, and social engineering controls, 317, 318
    - securing networks, 316, 317
  - Defense mechanisms, 325
  - Delivery
    - of digital products, entertainment, and media, 83, 94
    - speed of, 83
  - Dell's IdeaStorm, 248
  - Denial-of-service (DoS) attack, 306
  - Desktop purchasing, 118
  - Desktop search, 44
  - Detection measures, 303
  - Deterrent methods, 303
  - Digital Copy (DC), 360
  - Digital coupons, 88
  - Digital currencies, 353, 373
  - Digital customers, 20
  - Digital economy, 17–18, 21, 28
  - Digital enterprise, 18–19, 21
  - Digital glasses, 190
  - Digital government, 138–143
    - definition and scope, 138–139
    - electronic benefits transfer, 141
    - electronic voting, 140–141
    - E-Procurement, 141
    - G2B, 141
    - G2C, 140
  - Digital payments systems, 336
  - Digital Rights Management (DRM), 398
  - Digital signature, 312, 316
  - Direct marketing by mail-order, 73
  - Direct sales, 73
  - Discount rate, 340
  - Disintermediation, 40, 108
  - Display ads, 273
  - Distance learning/education, 146
  - Diversion theft, 307
  - DMZ architecture, 317
  - Dotnet, 310
  - Double-spend problem, 354
  - Drone delivery, 366
  - Drones, 366
  - Dual Firewall Architecture, 316
  - DYC Software Studio, 103
  - Dynamic pricing, 38, 46, 122
- E**
- E-auctions, 42, 141
    - benefits, 48, 49
    - limitation, 48
  - E-banking, 80
  - E-bartering, 49
  - EBay, 157
  - E-books
    - readers, 159
    - versus traditional books, 151
  - E-business, 6, 7, 19, 25
  - E-collaboration, 126
  - E-commerce, 404, 405
    - access control and communications, 325
    - activities, 37
    - and cultural differences, 394–395
    - and social commerce, 204
    - card payments, 372
    - Components and Participants, 39–40
    - customer data, 36

- E-commerce (*cont.*)
  - defending information systems, 314, 315
    - access control, encryption, and PKI, 314–316
    - business continuity and disaster recovery, 318, 319
    - controls, spam, pop ups, and social engineering
      - controls, 317, 318
      - securing networks, 316, 317
  - disintermediation and reintermediation, 40
  - electronic market, 39
  - e-marketplaces, 39–40
  - ethical and legal issues, 396
  - factors that determine success, 393
  - failures, 393
  - fulfillment process, 359
  - future
    - integrating the marketplace, 404
    - key factors, 404
    - limitation, 405
    - m-commerce, 405
    - social commerce, 405
    - speed, 405
  - guidelines for success, 394
  - information security, 324
  - intellectual property in, 396–398
  - legal concerns, 36
  - medical devices, 157
  - merchant server software, 44
  - merchant, 340
  - micropayments, 373
  - networks, defending, 313
  - old economy and, 394
  - online purchasing process, 38–39
  - payment method, 336, 337
  - pinned images, 36
  - privacy in, 399
  - robotics in, 156
  - search activities, 44
  - security battleground, 300
  - security issues, 324
  - security management concerns, 295
  - security strategy, 303
  - strategies for success, 393–394
  - successes, 393–394
  - traditional sites, 210
  - types of transactions, 37
- E-Commerce Investments
  - categories and benefits, 385
  - cost–benefit analysis, 386
  - increased pressure for financial justification, 385–387
  - justified, 385–386
  - using metrics in justification, 386–387
  - reasons for justification, 385
  - web analytics, 387
- E-Commerce security, 299–303, 322–324
  - enterprisewide, 322
    - drivers of EC security management, 322
    - Internet crime, 323
    - mobile devices, networks, and applications, 323, 324
    - policies and training, 322
    - risk analysis and ethical issues, 322, 323
    - senior management commitment and support, 322
  - issues and landscape, 299
    - attacks in vulnerable areas, 301, 302
    - battleground, 300
    - defenders, strategy, and methods, 303
    - requirements, 302, 303
    - security terminology, 299, 300
    - threats, attacks, and attackers, 300, 301
    - strategy and framework, 312, 313
- Economic and finance game, 246
- E-distributor, 44
- Editorial-style videos, 278
- Educational social games, 246
- EFactor, 239
- EFulfillment Service, 366
- EGift Card Program, 4
- E-government, 9, 10, 13, 26, 28
  - activities, 159
  - transformation to, 142
- E-government 2.0
  - and social networking, 142–143
  - potential of, 143
- E-health, 156–157, 160
- Elavon, 390
- E-learning
  - benefits, 145–146
  - definitions and concepts, 144–145
  - drawbacks and challenges, 146
  - innovations, 147
  - management systems, 149
  - via Robots, 147
  - social networks, 148
  - and training, 159
- E-learning 2.0, 148, 160
- Electronic (online) banking (e-banking), 80
- Electronic auctions, 47
- Electronic benefits transfer (EBT), 141
- Electronic book (e-book), 149–151
  - advantages and limitations, 150
  - devices for reading, 150
  - e-readers and tablets, 150
- Electronic catalog, 42, 44, 109
- Electronic commerce (EC), 4–15, 17–31
- Electronic commerce payment Systems
  - Alibaba's payment platform, 333
  - ATM business, 335
  - Billpoint, 348
  - credit-based transportation card, 346
  - cross-border customers, 332
  - cross-border transactions, 332
  - Korean cities, 346
  - MRT cards and bus cards, 346
  - noncash payments, 335
  - PayPal, 348
  - warehouses, 333
- Electronic data interchange (EDI), 10, 18, 27, 63, 110
- Electronic funds transfer (EFT), 10
- Electronic malls, 42
- Electronic market (e-marketplace), 7, 39
- Electronic Medical Record Systems (EMR), 156
- Electronic retailing (e-tailing), 69–70
  - advantages, 71
  - business models, 71–74
  - characteristics, 70–71
  - click-and-mortar retailers, 73
  - direct marketing, 73
  - direct sales, 73
  - model classification by distribution channel, 72–73
  - virtual (Pure-Play), 73
- Electronic shopping cart, 45
- Electronic signature, 321
- Electronic voting, 140

- E-mail advertising, 274
  - E-mail hoaxes, 275
  - E-mail marketing, 274
  - E-mail scam, 309, 310, 328
  - E-mail spam, 310
  - E-mail, attacking, 302
  - E-marketplaces, 39–41, 59
  - Embedded computing, 182
  - E-micropayments, 344
  - E-money, 353
  - Employee rewards, 328
  - Encryption algorithm, 315
  - Engineer-to-Order (ETO), 360
  - Enterprise mobility, 177, 193
  - Enterprise mobility management (EMM), 192
  - Enterprise networks, 53
  - Enterprise search, 44
  - Enterprise social networking
    - benefits of, 238
    - benefits to organizations, 241
    - characteristics, 240
    - help employees, 240, 241
    - obstacles and limitations, 238
    - support services, 241
    - taxonomy of social enterprise applications, 240
    - web 2.0 tools, 238
  - Enterprise wearables, 189
  - Enterprise-related applications, 171
  - Enterprisewide E-Commerce security, 322–325
  - Enterprisewide security programs, 313
  - Entertainment online, 83–84
  - Entrepreneurs, 14
  - Environmental hazards, 301
  - E-payment method, 338
  - E-procurement, 113, 114
  - ESOMAR, 270
  - E-tailing, 8, 11, 12, 23, 27, 67–69
    - business models, 93
    - issues, 91–92
  - Ethereum, 358
  - Ethics, 24
  - E-training, 137–138
  - Etsy, 97
  - EURES, 243
  - Event shopping, 74
  - EWOM marketing, 277
  - Expert/expertise location systems (ELS), 153, 154
  - Exposure, 299, 302
  - External collaboration, 127
  - Extranet, 7, 17, 18
- F**
- Facebook, 202, 205, 208, 210–213, 216–221, 224–231, 248
  - Facial recognition, 315
  - The Federal Trade Commission (FTC), 319
  - FedEx, 366
  - Fiat currency, 353
  - Field force automation (FFA), 178
  - File-sharing utilities, 158
  - Financial and banking applications, 193
  - Firewalls, 316
  - Flash deals (Deals of the Day), 74
  - Flash sales, 211
  - Fleet and field service management, 384
  - Flipsy, 216
  - Flirty, 366
  - Forced advertising, 273
  - Formal revenue model, 36
  - Forward auction, 47, 109, 111
  - Fotolia, 216
  - Fraud, 299, 309
  - Fraud detection systems, 322
  - Fraudulent card transactions, 341
  - Frequently asked question (FAQ) templates, 45
  - Frito-Lay, 248
  - Front-office operations, 359
  - Fulfillment by Amazon, 362
  - Full open-loop cards, 343
  - Future of shopping, 217
- G**
- Games on Social Networks, 246
  - Gamification, 124, 246–247
  - General controls, 317
  - Geosocial networking, 218–219
  - GhostNet, 297
  - Global collaboration, 129
  - Global consumer transactions, 335
  - Global E-commerce
    - barriers, 388–390
    - benefits and extent of operations, 388
    - breaking down the barriers, 390
    - and cultural differences, 388
    - economic and financial issues, 390
    - geographic issues and localization, 389–390
    - language translation, 388–389
    - legal issues, 389
    - machine translation, 389
    - payments in trades, 390
    - strategy for small and medium-sized enterprises, 391
    - web localization, 389–390
  - Global E-Commerce, 387–390
  - Global positioning system (GPS), 175
  - Globalization
    - and SMEs, 391
    - and Social Networking, 388
  - Goldcorp, 248
  - Goods-to-man method, 367
  - Google glass, 190, 399
  - Google revolution, 10
  - Google shopping express, 367
  - Government e-procurement, 141
  - Government-to-business (G2B), 141
  - Government-to-citizens (G2C), 140
  - Government-to-employees (G2E), 142
  - Government-to-government (G2G), 141
  - Group Buying, 74, 210–211
  - Group gifting online, 74
  - Group purchasing, 118, 141
  - Group reverse auctions, 117
  - Groupon, 229–232
- H**
- Hacker, 301, 308, 311
  - Harvard business review, 221
  - Heartbleed, 306
  - Henry Ford Health System (HFHS), 162
  - Hertz 24/7, 168
  - Hertz mobile apps, 168

Hertz's mobile services, 168  
 Hidden digital payments, 337  
 HighJump software, 369  
 Home appliance botnets, 306  
 HomeScan, 177  
 Horizontal information, 103  
 Horizontal marketplaces, 107  
 Hulu, 245  
 Human errors, 300  
 Hybrid cards, 343  
 Hygiene factors, 264

**I**

IBM Connections, 251  
 IBM Jam Events, 153  
 IBM PureSystems, 154  
 IBM'S Business and Professional Community, 240  
 Identity fraud, 310  
 Identity theft, 310  
 Inadequate logistical infrastructure, 363  
 Incentivized video ads, 274  
 Inefficient financial flows, 364  
 Information assurance (IA) model, 303, 312, 325
 

- authentication, authorization, and nonrepudiation, 312
- confidentiality, integrity, and availability, 312
- defense side EC systems, 313, 314
- EC security, 312

 Information security, 294–299
 

- cost of cybercrime, 299
- cyberwars and cyberespionage, 296
  - attacking information systems, 297
  - attacks, 297
  - cyberwarfare, 296
- darknet and the underground economy, 298
  - Internet, 298
  - keystroke logging, 299
  - social networking, 299
- EC security, 294
  - drivers, 297, 298
  - dynamic nature, 299
  - national security, 295
  - personal security, 295
  - security risks, 296
  - in the United States, 295
- mobile devices, 296
- sophistication of attacks, 299

 Innovation Jam, 153  
 Innovative e-fulfillment strategies, 370  
 INRIX (inrix.com), 183  
 Instagram, 219  
 Insurance online, 79  
 Integrated Global Logistics Program, 368  
 Integrity, 312  
 Intelink, 142  
 Intellectual property law, 396  
 Intelligent personal assistants, 175  
 Intentional attacks, 301  
 Intentional crimes, 301  
 Interactive ads, 273  
 Interactive marketing, 271  
 Interactive mobile advertising, 281  
 Interactive video, 279  
 Interactive voice response (IVR) systems, 175  
 InterActiveCorp (IAC), 46  
 Interchange rate, 340  
 Intermediaries, 40

Internal collaboration, 127  
 Internal Efficiency and Effectiveness (IEE), 142  
 Internet abuse
 

- managing, 395
- in workplace, 395

 Internet Advertising Bureau (IAB), 278  
 Internet advertising revenue, 270  
 Internet communities, 50  
 Internet crime, 323  
 Internet for person-to-person money lending, 158  
 Internet fraud, 325  
 Internet gambling, 85  
 Internet gaming, 85  
 Internet Job Market, 77  
 Internet malls, 41  
 Internet marketing, 69–71  
 Internet of Things (IoT), 185, 194, 306
 

- applications, 186
- audio and video equipment, 187
- benefits, 185
- characteristics, 185
- consumer applications, 187
- definitions, 185
- drivers, 186
- process, 186
- structure, 185

 Internet radio station, 244  
 Internet Silk Road, 298, 299  
 Internet TV and Radio, 84  
 Internet underground economy, 298  
 Internet/Web search, 44  
 Internet-enabled cell phones, 190  
 Intrabusiness EC, 8  
 Intranets, 6, 7, 17, 18  
 Intrusion Detection Systems (IDS), 317  
 Iranian nuclear program, 297  
 IRobot, 223, 224  
 iTunes, 84

**J**

Jam events, 153  
 Job market, online, 77–78
 

- benefits and limitations, 78
- internet job market, 77–78
- portals for job placement, 78
- on social networks, 77–78

 Job referral social networking sites, 78  
 Junk e-mail, 310

**K**

Key (key value), 315  
 Key performance indicators (KPIs), 387  
 Keystroke logging (keylogging), 299  
 Keyword advertising, 275  
 Kiva robots, 367  
 Knowledge management (KM), 151
 

- and E-Commerce, 152, 153
- expert location systems, 153–154
- knowledge sharing, 152
- live chat with experts, 154
- Q&A on social networks, 153–154
- types and activities, 151–152

 Knowledge portals, 43  
 Knowledge sharing, 152  
 Knowledge-based systems, 155

- L**
- Last.fm, 244
  - LearnHub, 148
  - Learning management system (LMS), 147, 149, 160
  - LEGO, 268
  - LendingTree, 216
  - LinkedIn, 255, 256
    - mobile applications, 256
    - ways to use, 256
  - Litecoin, 358
  - Lithium Social Web software, 202
  - Live banners, 273
  - Live web events, 284
  - Lizard stresser, 306
  - Location-based e-commerce (l-commerce), 74
  - Logistics management, 369
  - Logistics service providers, 364
  - Logistics-related partnerships, 367
- M**
- Machine translation, 389
  - Macro virus (macro worm), 305
  - Magstripe reader, 352, 373
  - Maintenance, repair, and operation (MRO), 107
  - Make-to-Order (MTO), 360, 368
  - Make-to-Stock (MTS), 360
  - Malfunctions in the computer system, 301
  - Malvertising, 307, 318
  - Malware (malicious software), 299, 304
  - Malware attack methods, 304–311
    - malware (malicious code), 304
      - botnets, 306
      - DoS attack, 306
      - malvertising, 307
      - security bugs, 306
      - viruses, 304
      - worms, 305
    - nontechnical methods
      - attacks and remedies, 310
      - cyber bank robberies, 310
      - data breach, 311
      - fraud and scams on internet, 308–310
      - identity theft and fraud, 310
      - social engineering and fraud, 307, 308
      - social networking, 311
      - social phishing, 308
      - spam attacks, 310, 311
      - spyware, 311
    - technical and nontechnical attacks, 304
    - technical methods, 303, 304
  - Managerial issues, 324
  - Man-to-goods method, 367
  - Market research, online, 267
  - MasterCard, 346
  - MasterCard Digital Enablement Service, 351
  - Maverick buying, 112
  - M-business, 169
  - M-commerce, 405
    - applications, 171–172
    - benefits, 172
    - benefits to society, 173
    - components and services, 173–175
    - drivers, 171
    - EC applications, 170
    - landscape, 170
      - mobile computing, 191
      - navigation systems, 191
  - Merchant Customer Exchange (MCX), 351
  - Merchant software, 42
  - Merge-in-transit, 370
  - The Merry Wives of Windsor, 331
  - M-government, 143
    - benefits, 143
    - implementation issues, 143
  - Micropayment strategy, 371
  - Micropayments, 344
  - Microprocessor chip, 343
  - Microsite, 42
  - Mixi, Inc., 244
  - M-learning, 145
  - Mobile advertising (m-advertising), 182, 221, 280
  - Mobile Application Management (MAM), 192
  - Mobile applications, 192
  - Mobile banking (m-banking), 82, 176
  - Mobile clienteling applications, 352
  - Mobile commerce (m-commerce), 169, 190
  - Mobile computing, 53, 105, 191
  - Mobile Device Management (MDM), 192
  - Mobile devices, 169, 173
    - protecting, 323, 324
    - security risks, 296
    - wireless activities, 298
  - Mobile digital wallet, 350
  - Mobile enterprise, 177
  - Mobile entertainment, 178, 179
  - Mobile finance applications, 176
  - Mobile financial services, 175
  - Mobile games, 179
  - Mobile government (m-government), 143.
    - see* M-Government
  - Mobile Information Management (MIM), 192
  - Mobile intelligence, 172
  - Mobile marketing and advertising, 181, 280, 287
  - Mobile Marketing Association (MMA), 282
  - Mobile messaging, 277
  - Mobile payment, 371, 373
    - buyer, 349
    - coin, 351
    - consumer, 350
    - contactless payments, 350
    - EC payments, 349
    - financial institutions, 349
    - merchant, 350
    - network operator, 349
    - NFC, 350, 351
    - seller, 349
  - Mobile portal, 43, 174
  - Mobile POS (mPOS) devices, 352
  - Mobile security issues, 323–324
  - Mobile social networking, 53, 54
  - Mobile systems, 371
  - Mobile video sharing, 54
  - Mobile worker, 177
  - MobileLearn, 145
  - Moodle, 149
  - Motion Picture Association of America (MPAA), 410
  - Motivational and hygiene factors, 264
  - Motorola enterprise, 196
  - Multi-channel order management, 363
  - Multimedia messaging service (MMS), 174
  - My Marriott Hotel (game), 148

**N**

Name-your-own-price model, 47  
 Nano, 180  
 National Cyber Response Coordination Group (NCRCG), 295  
 National security, 295  
 National standardization and integration effort, 347  
 Near field communication (NFC), 298, 350  
 Negotiated pricing, 50  
 Nestlé Interactive Social Commerce Site, 210  
 Nestlé Marketplace website, 210  
 NeverLost® GPS system, 168  
 NFC and EMV chip card, 353  
 Nomadic computing, 173  
 Noncash transactions, 336  
 Nonconvertible virtual currency, 354  
 Nonproduction materials, 107  
 Nonrepudiation, 302, 312

**O**

Offline methods, 267  
 On-demand delivery of products, 83  
 On-demand delivery service, 94  
 Online advertising methods, 287  
 Online advertising plan, 284  
 Online advisory systems, 160  
 Online auction, 46  
 Online bank transaction security, 81–82  
 Online banking capabilities, 81  
 Online banking risk, 82  
 Online billing and bill paying, 82  
 Online card payments, 372  
 Online consumer behavior, 262, 263  
 Online corporate training, 147–148  
 Online fraud attacks, 309  
 Online fraud, protection, 319  
   buyer protection, 319, 320  
   buyers and sellers, 321, 322  
   consumer (buyer) protection, 319  
   marketplaces and social network services, 321  
   seller protection, 320, 321  
 Online gambling, 85  
 Online intermediaries, 105  
   broker, 43  
   E-distributors, 44  
 Online malls, 73  
 Online market research, 267, 270  
 Online noncash payments, 335  
 Online piracy, 302  
 Online purchases, 38, 336  
 Online research methods, 270  
 Online survey, 267  
 Online transactions, 264  
 Open-loop card, 343  
 Order fulfillment process, 359, 360, 373  
 Organizational knowledge base, 151  
 Outbound functions, 364  
 Oxford handbook of the digital economy, 88

**P**

Paid inclusion or sponsored ads, 276  
 Pandora, 244  
 Pandora radio, 84  
 Partners online, 127  
 Patents, 398

Patient portals, 43  
 Pay per click (PPC), 283  
 Payment cards, 338  
 Payment gateway service, 371  
 Payment of Things hardware, 351  
 Payment option, 38  
 Payment service providers (PSPs), 339, 341  
 PayPal, 348, 349, 353, 373  
 PayPal button, 351  
 PayPal micropayments, 346  
 Peer-to-peer (P2P) negotiation, 50  
 Penetration test (pen test), 314  
 Penny auction, 48  
 Permission marketing, 282  
 Per-product videos, 278  
 Personal security, 295  
 Personalization, 265  
 Personalized banners, 273  
 Personalized services, 265  
 Person-to-Person (P2P), 350  
   e-commerce, 157  
   lending, 81  
   money lending, 216  
   sharing, 216  
   transactions, 353  
 Pervasive computing, 182  
 Phishers, 294  
 Phishing, 299, 307, 308, 318, 325  
 Physical controls, 318  
 Pinterest  
   advertising and marketing, 36  
   business, 36  
   valuation, 36  
 Pinterest, 35, 37  
 The Pirate Bay (TPB) site, 410, 411  
 PirateEye, 397  
 Plaintext, 315  
 Platform for Privacy Preferences Project (P3P), 402, 403  
 Point of sale (POS), 352  
 Political espionage and warfare, 297  
 Pollution reduction game, 246  
 Polyvore, 208, 211, 212, 215, 228  
 Pop-ups, 318  
 Portable card readers, 339  
 Portable computing devices, 173  
 Portal, 42  
 Portals for Job Placement, 78  
 Postal address validation service, 342  
 Pretexting, 307  
 Prevention measures, 303  
 Privacy  
   e-marketplaces, 41  
   enterprise network, 240  
   issues in Web 2.0 tools and social networks, 403  
   key, 316  
   policies, 402  
   protection by ethical principles, 403  
   protection by information technologies, 402  
   protection in countries, 403–404  
   rights and protection, 399–400  
   settings, 406  
   shopping clubs, 74, 212–213  
   system, 315  
 Procter and Gamble's researchers, 248  
 Procurement, 112  
 Procurement department, 134

- Procurement methods, 112
  - Procurement Office (PO), 134
  - Product cycle time, 262
  - Product/service itself, 264
  - Professional social networks, 52
  - Profit-induced crimes, 298
  - Project Glass, 190
  - PRO-Net, 141
  - Proof-of-work scheme, 355
  - Pseudo-anonymous, 357
  - Public (asymmetric) key encryption, 316
  - Public e-marketplaces, 41, 104
  - Public key, 316
  - Public key infrastructure (PKI), 313, 315
  - Public ledger, 355
  - Publishing portals, 43
  - Purchasing card (P-card), 118
  - Pure virtual banks, 81
- Q**
- Q&A platform, 46
  - Quick Response (QR) code, 351
- R**
- Radio Frequency Identification (RFID), 174
  - Ratware, 310
  - Real estate market, 176
  - Real Estate Online, 79
  - RealGifts, 212
  - Real-Time Online Shopping, 217
  - Recovery, 303
  - REI Adventure, 226
  - Reintermediation, 40
  - Remote access server (RAS), 317
  - Replenishment Centers, 362
  - Request for quote (RFQ), 47, 115
  - Retailers *versus* E-Tailers, 89
  - Retinal scan, 315
  - Revenue models, 122
  - Reverse auction, 47, 115, 116
  - RFID chips, vulnerability, 302
  - Riding the Bullet, 149
  - Ripple, 358
  - Robotics in E-Commerce, 156
  - RSS feeds, 124
  - Rule-Based Filtering, 266
  - Rustock, 306
- S**
- Sabotage, 296
  - Salesforce automation (SFA), 178
  - Satoshi, 355
  - Scams, 309, 310
  - Search advertising, 275
  - Search engine optimization (SEO), 275, 276
  - Search engine spam, 311
  - Secure Socket Layer (SSL), 316
  - Security for online bank transactions, 81–82
  - Security risks
    - 2014 and 2015, 296
    - mobile devices, 296
  - Self-customize products and services, 46
  - Seller protection, online fraud, 320, 321
  - Sell-side marketplace, 109
  - Sell-side systems, 110
  - Semantic Web, 58
  - Seoul Bus Card, 346
  - Seoul Bus Transport Association (SBTA), 346
  - Service industry consumer applications
    - healthcare, 180
    - hospitality management, 180
    - tablets, 181
  - Sharing economy, 17
  - Shipment center, 42
  - Shopbot software agents, 86
  - Shoppers on social networks, 211
  - Shoppers' negligence, 323
  - Shopping assisting tools, 87–88
  - Shopping communities, 211
  - Shopping portals, 85–86
  - Shopping robots ("shopbots"), 85
  - Shopping websites
    - comparison, 87
    - concerns, 87
    - ratings, reviews, and recommendation, 86–87
    - trust verification sites, 87
  - ShopSocially, 216
  - Short message service (SMS), 174, 270
  - Signature recognition, 315
  - Singapore electronic road pricing system, 345
  - Single Europe Payment Area (SEPA), 343
  - SM chain of malls in Philippines, 90
  - Small and medium-sized enterprises (SMEs)
    - advantages and disadvantages of EC, 391
    - and social networks, 392
    - e-commerce strategy, 391
    - globalization and, 391
    - resources to support activities in EC, 391–392
  - Small business on Facebook, 227
  - Smart card, 342, 372
  - Smart card payment systems, 344
  - Smart card reader, 342
  - Smart cars, 188
  - Smart grid, 183
  - Smart meters, 183
  - Smartphone, 173, 336
  - Smartphones and wireless systems, attacking, 302
  - Smartwatch, 189
  - Snapchat, 221
  - Social (digital) customer, 20, 21, 29
  - Social Ads and Apps, 218
  - Social AR gaming, 55
  - Social bookmarking, 214
  - Social business, 15, 19, 21, 29, 30, 236–237
  - Social business (IBM Approach), 207
  - Social collaboration, 129, 240, 249–252
    - collaboration 2.0, 250–251
    - essentials of, 250–252
    - role of mobile commerce, 251
    - tools for, 251–252
  - Social commerce (SC), 15, 405
    - benefits to customers, 206
    - benefits to enterprises, 206–207
    - benefits and limitations, 227
    - benefits to retailers, 206
    - concerns and limitations, 207–208
    - content of field, 204–206
    - definition and evolution, 227
    - drivers, 208

- Social commerce (SC) (*cont.*)
    - and e-commerce, 204
    - evolution of, 203–204
    - future of, 252
    - influence businesses, 227
    - innovative e-commerce business models, 207
    - roles in, 209
    - scope, content, and drivers, 227
  - Social computing, 14–16, 28
  - Social customer relationship management (SCRM), 222
    - benefits, 222–223
    - components of, 222
    - evolution of, 224
    - iRobot, 223, 224
  - Social customer service, 221–223
  - Social employees, 237
  - Social engineering, 300, 307
  - Social engineering and fraud, 313
  - Social engineering attacks, 318
  - Social engineering controls, 317
  - Social engineering tools, 296
  - Social enterprise, 3–6, 17–19, 21, 205–206, 236, 237
  - Social entertainment, 244–245
  - Social game, 245, 246
  - Social jobs partnership, 243
  - Social learning theory, 148
  - Social marketplaces and direct sales, 215–216
  - Social media, 4–5, 11, 12, 14–17, 19, 24, 25, 27, 28, 30, 31, 168, 294
  - Social media and commerce, 156–157
  - Social media marketing (SMM), 204, 205
  - Social media projects, 202
  - Social mobile applications, 54
  - Social network, 14–16, 18, 27, 29, 246
    - companies interface with, 242
    - and e-learning, 148
    - entertainment and, 244–245
    - globalization and, 388
    - hackers, 311
    - job markets, 242–244
    - justifying initiatives, 387
    - major interfaces with, 242
    - recruiting and job searching using, 243
    - security problems, 311
    - spam attacks, 311
    - search, 45
    - service sites, 15, 16, 51
    - spans, 318
  - Social phishing, 308
  - Social publishing, 240
  - Social recruiting, 242, 243
  - Social search, 45
  - Social shopping, 228
    - aids, 213–215
    - benefits, 209
    - concepts and content, 208–209
    - definitions and drivers, 208–211
    - in future, 217
    - online communities, 211
    - site, 209–210
  - Social Television (TV), 84–85
    - adult entertainment, 85
    - characteristics, 85
    - internet gaming, 85
    - legal aspects, 85
  - Social Travel Networks, 75, 76
  - Socialcast, 241
  - Social-oriented services, 53
  - Socialtext, 241
  - Software vendors, 370
  - Sony Corporation, 201, 202
    - community site, 202
    - Facebook support community, 202
    - monitors social media conversations, 202
    - problem, 201–202
    - social media projects, 202
  - Sortation centers, 362
  - Spam, 300, 325
    - attacks, 310
    - sites, 311
  - Spamming, 274, 310
  - Speed of delivery, 83
  - Splogs, 311
  - Sports mobile applications, 180
  - “Spy” services, 86
  - Spyware, 269, 311, 318, 402
  - Square Magstripe Reader, 353
  - Starbucks, 3
    - activities on Facebook, 4–5
    - digital network, 5
    - egift card program, 4
    - on LinkedIn and Google, 5
    - loyalty program, 4
    - mobile payments, 4
    - online store, 4
    - on Twitter, 5
    - on YouTube, Flickr, Pinterest, and Instagram, 5
  - State University of New York (SUNY) College at Old Westbury, Internet, 293, 294
  - Static banners, 273
  - Stationary card readers, 339
  - Stock trading and investments, online, 79–80
  - Stock trading mobile tools, 176
  - Stored-value card, 343, 372
  - Storefront, 109
  - Storenvy, 216
  - Stuxnet, 297
  - Supply chain, 360
  - Supply chain management (SCM), 360, 369
  - Supply Chain Planning Systems of Record (SCP SOR), 370
  - Sweetheart schemes, 328
  - Symmetric (private) key encryption, 315, 316
- T**
- Tablet computer, 174
  - Target security breach, 308
  - Taxes, 82
  - Techopedia, 307
  - Telemarketing, 271
  - Telematics, 157
  - Telephone scams, 328
  - Telephone surveys, 267
  - Teleworking, 384
  - Telstra Corp., 383, 384
    - fleet and field force management, 384
    - solution, 384
    - teleworking, 384
    - video conferencing, 384
    - web contact centers, 384
  - Tendering (bidding) system, 23
  - Teusner Wines, 226
  - Third-party assurance services, 320

Third-party logistics suppliers (3PL), 364  
 Third-party payment gateways, 373  
 ThisNext, 208  
 Thumbprint or fingerprint, 315  
 Ticketing Online, 84  
*Time* magazine, 68  
 Tmall Global site, 333  
 Trade administration process, 62  
 TradeManager app, 103  
 Trademarks, 398  
 TradeNet system, 63  
 Trading exchanges, 104  
 Traditional auctions, 46  
 Traditional off-line auctions, 46  
 Traditional procurement process, 112  
 Transit systems, 344  
 Transponders, 344  
 Transport Layer Security (TLS), 316  
 Transportation card company, 346  
 Transportation management systems (TMS), 370  
 Travel and Tourism (Hospitality) Services, online, 74–76  
   benefits, limitations, and competition, 76  
   corporate travel, 76  
   and mobile devices, 75  
   social travel networks, 75–76  
   travel characteristics, 75  
   TripAdvisor, 75  
   WAYN, 76–77  
 TripAdvisor, 75, 207, 213, 231  
 Trojan horse, 305  
 Trojan-Phisher-Rebery, 305  
 TRUSTe program, 320  
 Trusted community, 297  
 Trustmark, 320  
 Turla, 297  
 TV and online advertising, 272  
 Twitter to Support Collaboration, 251

**U**

Ubiquitous computing (ubicom), 182, 194  
 Ubiquitous systems, 184  
 Ultra-mobile PCs (UMPCs), 173  
 UN Crime and Justice Research Institute (Unicri), 296  
 Unintentional threats, 300  
 United States Computer Emergency Readiness Team (U.S.-CERT Operations), 295  
 U.S. Department of Energy (DOE), 183

**V**

Value proposition, 18, 22–24  
 Value-added services (VAS) processing, 364  
 Vendor-managed inventory (VMI), 127, 364  
 Vertical marketplaces, 107  
 Video advertising, 278  
 Viral blogging, 218  
 Viral marketing, 218, 277, 281  
 Viral video, 219, 278  
 Virtual (Pure-Play) E-Tailers, 73  
 Virtual communities, 50, 60  
   classification, 51  
   public vs. private, 50  
   social gaming types, 50

Virtual currency, 353  
 Virtual economy, 217  
 Virtual gifts, 213  
 Virtual job fairs, 243–244  
 Virtual Private Networks (VPNs), 316, 317  
 Virtual reality, 55  
 Virtual trade shows, 124  
 Virtual Universities, 146–147  
 Virus, 304  
 Visa or MasterCard®, 343  
 Visual interactive simulation, 148–149  
 Visual search, 45  
 Voice ID (voice authentication), 315  
 Voice portal, 43, 175  
 Voice-powered search, 45  
 Voting, electronic systems, 140  
 Vulnerability, 300, 302  
   assessment, 314  
   in business IT and EC systems, 302  
   information, 302  
   RFID chips, 302  
   and security needs, 313  
   and technical attacks, 324

**W**

Walmart, 366  
 Walmart Pay, 351  
 Wanelo, 212  
 Warehouse management system (WMS), 364, 370  
 WAYN, 76–77  
 Wearable computing and devices, 188  
 Wearable Devices, 174  
 Web (information) portal, 42  
 Web 2.0, 11, 14–16, 24–26, 28, 29, 57  
 Web 3.0, 57, 58  
 Web 4.0, 58  
 Web advertising, 272, 287  
 Web analytics and mining, 269, 387  
 Web series and streaming movies, 244  
 Web surveys, 268  
 Web-based surveys, 270  
 Webinars, 284  
 Webstore, 42  
 WebTrust seal program, 320  
 Wi-Fi connection, 168  
 Wikipedia, 248  
 Wireless mobile computing, 173  
 Wireless sensors, 180  
 Wireless solutions, 196  
 WordPress, 305  
 Worm, 305

**Y**

Yammer, Inc., 241  
 Yelp, 88, 215  
 Yelpers, 328–329  
 Yipit, 88

**Z**

Zillow, 79  
 Zombie, 300, 306