WHAT IS COMMERCE?

- **Commerce** is the activity of buying and selling of goods and services, especially on a large scale.

- A system or environment consists of legal, economical, political, social, cultural and technological systems that are in business in any country or internationally.

- It can also be defined as a component of business which includes all activities, functions and institutions involved in transferring goods from producers to consumers.

WHAT IS E-COMMERCE?

- E simply means anything done via the internet and commerce means buying and selling products, services and information.

-   So, E-Commerce refers to the process of buying and selling or exchanging of products, services, or information via computer networks including internet.

- E-commerce is the online process of developing, marketing, selling, delivering, servicing, and paying for products & services transacted on internetworked, global marketplaces of customers, with the support of a worldwide network of business partners.

E-COMMERCE VS. E-BUSINESS

We use the term e-business to refer primarily to the digital enablement of transactions and processes within a firm, involving information systems under the control of the firm. E-commerce includes commercial transactions involving an exchange of value across organizational boundaries.

So it is understandable that, any e-commerce falls into e-business but not all the e-businesses can be termed as e-commerce when they are performed inside the organization.
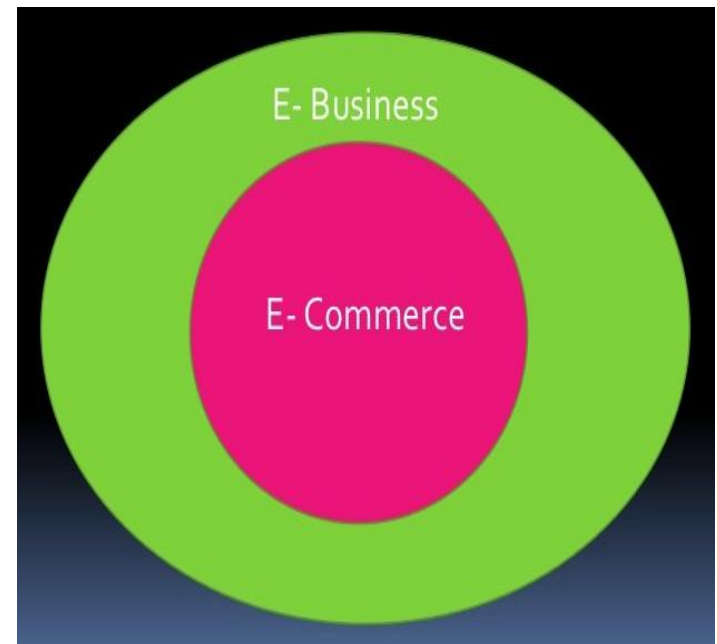
E-COMMERCE VS. TRADITIONAL COMMERCE

Traditional commerce

- Consumer as passive targets
- Mass-marketing driven
- Sales-force driven
- Fixed prices
- Information asymmetry
- Relied on mass production not customization and personalization.

E-commerce

- Reduction in information asymmetry
- Highly price competitive market
- Consumers gain access in free flow of information
- Merchants gain market power over consumer by using consumers personal information to maximize their revenue.

FEATURES OF E-COMMERCE TECHNOLOGY

1. Ubiquity
2. Global reach
3. Universal standards
4. Information richness
5. Interactivity
6. Information density
7. Personalization/customization
8. Social technology

6

FEATURES OF E-COMMERCE TECHNOLOGY

- **Ubiquity:** Available just about every where, at all time.
  - Marketplace extended beyond traditional boundaries and removed from a temporal and geographic location- called markets pace.
  - Reduces transaction costs- (time and money travelling to a market).
  - Lowers cognitive energy

- **Global Reach:**
  - Allows transactions across boundaries (cultural, regional and national) more conveniently and cost-effectively
  - Reach- the total number of users or customers an e-commerce business can obtain.

FEATURES OF E-COMMERCE TECHNOLOGY

- **Universal standard:** standards that are shared by all nations around the world.
  - Lower market entry costs
  - Reduce search cost
  - Price discovery becomes simpler, faster and more accurate
  - Network externalities-benefits that arise because everyone uses the same technology.
  - Easy to find many of suppliers, prices and delivery term of a specific product anywhere of the world
- **Richness:**
  - The complexity and content of a message.
    - In traditional market, national sales forces and small retail store-grate richness (personal, face-to-face service)

      But, trade-off between richness and reach.
      (larger audience less rich message)

8

FEATURES OF E-COMMERCE TECHNOLOGY

- **Interactivity:** Technology that allows for two-way communication between merchant and consumer and among consumers.
  - Similar to face to face.
- **Information Density:** The total amount and quality of information available to all market participants.

  E-com technology-
  - Reduces information collection, storage, processing, and communication cost.
  - Greatly increases currency, accuracy and timeliness of information.

  As a result, information becomes more plentiful, less expensive and higher quality.

  Business consequences of information density:

9

FEATURES OF E-COMMERCE TECHNOLOGY

o Price and cost becomes more transparent (to consumers)- Price transparency and cost transparency

o Know more about consumer→ can segment market → engage in price discrimination

➢ **Personalization and customization**

o Personalization: the targeting of marketing messages to specific individuals by adjusting the message to a person's name, interests and past purchase.

o Customization: Changing the delivered products or service based on a user's preferences or prior behavior.

o TV vs. online version of wall Street Journal

Personalization and customization allow firms to precisely identify market segments and adjust their message.

DIFFERENT TYPES OF E-COMMERCE

- Business-to-business (B2B)
- Business-to-Consumer (B2C)
- Business-to-government (B2G)
- Consumer-to-consumer (C2C)
- Government to consumer (G2C)
- Government-to-business (G2B)

WHAT IS B2B E-COMMERCE?

- B2B e-commerce is simply defined as ecommerce between companies

- About 80% of e-commerce is of this type.

- Examples:
  - Intel selling microprocessor to Dell
  - Heinz selling ketchup to McDonalds

12

WHAT IS B2C ECOMMERCE?

- Business-to-consumer e-commerce, or commerce between companies and consumers, involves customers gathering information; purchasing physical goods or receiving products over an electronic network.

- Example:
  - Dell selling me a laptop

13

WHAT IS B2G ECOMMERCE?

- Business-to-government e-commerce or B2G is generally defined as commerce between companies and the public sector.

- It refers to the use of the Internet for public procurement, licensing procedures, and other government related operations

- Example:
  - Business pay taxes, file reports, or sell goods and services To Govt. agencies

14

WHAT IS C2C ECOMMERCE?

- Consumer-to-consumer e-commerce or C2C is simply commerce between private individuals or consumers.

- Example:
  - Mary buying an iPod from Tom on eBay
  - Me selling a car to my neighbor

WHAT IS G2C E-COMMERCE?

o This Model is also a part of e-governance.

o The objective of this model is to provide good and effective services to each citizen. The Government provides the following facilities to the citizens through website. Information of all government departments, Different welfare schemes, Different application forms to be used by the citizens.

o Example:

- Help Line

Government → Website → Citizen

WHAT IS G2B E-COMMERCE?

- Government-to-business (G2B) is a business model that refers to government providing services or information to business organization. Government uses B2G model website to approach business organizations. Such websites support auctions, tenders and application submission functionalities.
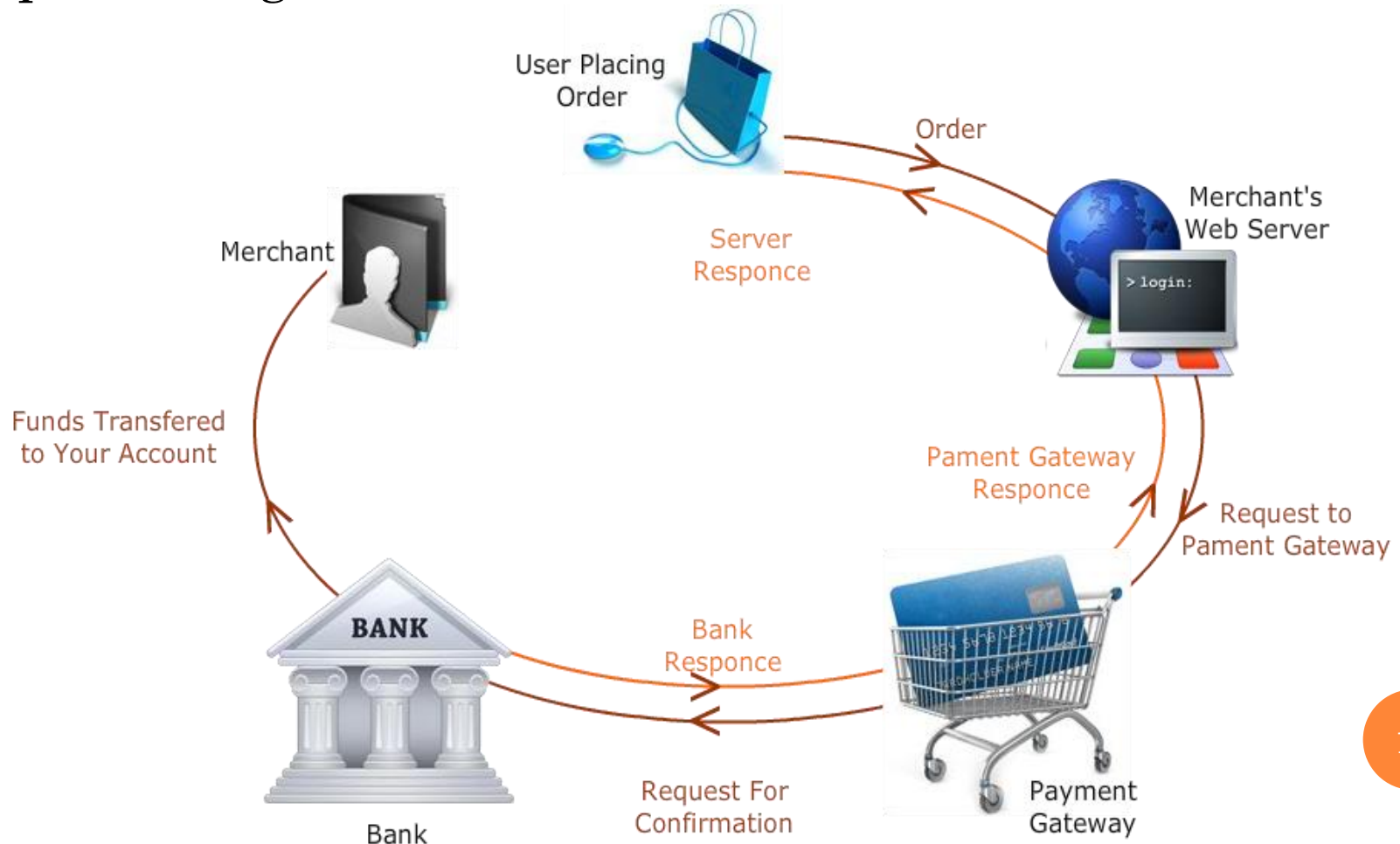
THE PROCESS OF E-COMMERCE

- A prospective consumer, who wants to buy something, uses Web browser to connect to the home page of a merchant's Web site through the Internet.

- The consumer browses the catalog of products featured on the site and selects items to purchase.

- The selected items are placed in the electronic equivalent of a shopping cart.

- When the consumer is ready to complete the purchase of selected items, he/she provides a bill-to and ship-to address for purchase and delivery

- When the credit/debit card number is validated and the order is completed at the Commerce Server site, the merchant's site displays a receipt confirming the customer's purchase

18

THE PROCESS OF E-COMMERCE

- The Commerce Server site then forwards the order to a Processing Network for payment processing and fulfillment.

User Placing Order

Order

Merchant's Web Server

> login:

Merchant

Server Responce

Funds Transfered to Your Account

Pament Gateway Responce

Request to Pament Gateway

BANK

Bank Responce

Request For Confirmation

Payment Gateway

Bank

Web 2.0

- User-centered applications and social media technologies

- A set of applications and technologies that allows users to create, edit, and distribute content; share preferences, bookmarks, and online personas; participate in virtual lives; and build online communities.
  - User-generated content and communication
  - Highly interactive, social communities
  - Large audiences; yet mostly unproven business models
  - Examples: Twitter, YouTube, Instagram, Wikipedia, Tumblr

20

E-commerce: A Brief History

- 1995–2000: Invention
  - Key concepts developed
  - Limited bandwidth and media
  - Selling retail goods, usually simple goods
  - Marketing: un sophisticated static display ads,
  - Not very powerful search engine
    - For computer scientists and information technologists
      - universal communication and computing environment
      - Every one can access cheap or free
  - For economists
    - Perfect information
    - Merchant can access to millions of consumers
    - Lowered search costs, reduced information asymmetry, disintermediation, price and cost transparency, elimination of unfair competitive advantage

E-COMMERCE: A BRIEF HISTORY

- For entrepreneur
  - First-mover advantages
  - Network effect: occurs when users receive value from the fact that everyone else uses the same tolls or product (common operating system such as Windows).
  - In Early years e-commerce expected that extraordinary profitability would come only after several years of loses.

E-COMMERCE: A BRIEF HISTORY

- 2001–2006: Consolidation
  - Emphasis on business-driven approach
  - Traditional large firms expand presence, strengthening their market position,
  - Start-up financing shrinks up
  - Traditional bank financing
  - More complex products and services sold (ex: travel and financial services)
  - Growth of search engine advertising, rich media and video ads
  - Business (both small and large) Web presences expand to include e-mail, display and search advertising, and limited community feedback features

23

E-COMMERCE: A BRIEF HISTORY

- 2007–Present: Reinvention
  - Rapid growth of:
    - Online social networks
    - Mobile platform
    - Local commerce

    ("SoLoMo")
  - Entertainment content develops as major source of e-commerce revenues
  - Transformation of marketing
    - Coordinated marketing on social, mobile, local platforms
    - Increasing use of SNS and viral marketing
    - Powerful data repositories
    - Analytic technologies

E-commerce Business Models

- E-tailer
- Community providers
- Content provider
- Portal
- Transaction broker
- Market creator
- Service provider

25

E-TAILER

- Online version of traditional retailer
- Revenue model: Sales of goods
- Variations:
  - Virtual merchant: Amazon, iTunes
  - Bricks-and-clicks: Walmart.com, Sears.com
  - Manufacturer-direct: Dell.com, SonyStyle
- Low barriers to entry

COMMUNITY PROVIDER

- Provide online environment (social network) where people with similar interests can transact, share content, and communicate with like minded people.

  Examples: Facebook, LinkedIn, Twitter, Pinterest

- Value Proposition: to create a fast convenient, one-stop site, user can focus on their most important concerns and interest, share experience with friends and learn more about their own interest.

- Revenue models:
  - Typically hybrid, combining advertising, subscriptions, sales, transaction fees, and so on

CONTENT PROVIDER

- Digital content on the Web:
  - News, music, photos, video, text, artwork

    Example: WSJ.com. Harvard Business Review, CNN.com, CIO.com
- Revenue models:
  - Subscription; pay per download (micropayment); advertising; affiliate referral
  - Those who own content are gainer.
- Variations:
  - Syndication- firm does not own material just distributes it
  - Web aggregators (shopping.com, Travelocity, Priceline) aggregate info and add value to it

PORTAL

- Searching capability plus an integrated package of content and services such as news, email, instant messaging, calendar, shopping, music downloads, video streaming, etc.

- Do not sell anything directly (unbiased)
  - Top 5 sites gather more than 95% of the search engine traffic.

- Revenue models:
  - Advertising, referral fees, transaction fees, subscriptions

- Variations:
  - Horizontal/general includes all internet users (Yahoo,MSN, AOL, Google)
  - Vertical/specialized (vortal) focus around a particular subject matter or market segment (Sailnet.com)

TRANSACTION BROKER

- Process online transactions for consumers
  - Primary value proposition—saving time and money, and enabling online transactions (stocks, credit card and PayPal payments)
  - Provide timely information and opinios
- Revenue model:
  - Transaction fees (flat rate or sliding scale related to size of the transaction)
- Industries using this model:
  - Financial services
  - Travel services and entertainment
  - Job placement services

30

MARKET CREATOR

- Create digital environments where buyers and sellers can meet and transact business

- Examples:
  - Priceline (reverse auction)
  - eBay
  - E*trade

- Revenue model:
  - Transaction fees, fees to merchants for access

SERVICE PROVIDER

- Offers services online
  - Example: Google—Google Maps, Google Doc, Gmail, and so on.
  - Other personal services such as online medical bill management, financial and pension planning, travel recommendation etc are growing.
- Value proposition
  - Valuable, convenient, time-saving, low-cost alternatives to traditional service providers
- Revenue models:
  - Sales of services, subscription fees, advertising, sales of marketing data

ADVANTAGES OF E-COMMERCE:

- Faster buying/selling procedure, as well as easy to find products

- Buying/selling 24/7

- More reach to customers, there is no theoretical geographic limitations

- Low operational costs and better quality of services

- No need of physical company set-ups. Easy to start and manage a business

- Customers can easily select products from different providers without moving around physically

DISADVANTAGES OF E-COMMERCE

- Unable to examine products personally
- Not everyone is connected to the Internet
- There is the possibility of credit card number theft
- Mechanical failures can cause unpredictable effects on the total processes

IMPACT OF E-COMMERCE

o Improving Direct Marketing
o Product Promotion
o New Sales Channels
o Direct Savings and Reduced Cycle Time
o Customer Service
o Brand or Corporate Image
o Transforming Organizations
o Technology and Organizational Learning
o Changing Nature of Work
o New Product Capabilities
o New Business Models

E-COMMERCE MARKETING

- new ways of identifying and communicating with millions of potential customers at costs far lower than traditional media.
- Search engine marketing, Data mining, Recommender systems, and Targeted e-mail.
- Enables long tail marketing.
- Banner, Rich media, and Video ads.
- Behavioral targeting refers to tracking the clickstreams.

# ONLINE MARKETING AND ADVERTISING FORMATS (BILLIONS)

MARKETING FORMAT	2012 REVENUE	DESCRIPTION
Search engine	$17.6	Text ads targeted at precisely what the customer is looking for at the moment of shopping and purchasing. Sales oriented.
Display ads	$8.7	Banner ads (pop-ups and leave-behinds) with interactive features; increasingly behaviorally targeted to individual Web activity. Brand development and sales. Includes blog display ads.
Video	$2.9	Fastest growing format, engaging and entertaining; behaviorally targeted, interactive. Branding and sales.
Classified	$2.6	Job, real estate, and services ads; interactive, rich media, and personalized to user searches. Sales and branding.
Rich media	$1.8	Animations, games, and puzzles. Interactive, targeted, and entertaining. Branding orientation.
Lead generation	$1.7	Marketing firms that gather sales and marketing leads online, and then sell them to online marketers for a variety of campaign types. Sales or branding orientation.
Sponsorships	$1.61	Online games, puzzles, contests, and coupon sites sponsored by firms to promote products. Sales orientation.
E-mail	$.22	Effective, targeted marketing tool with interactive and rich media potential. Sales oriented.

FEATURES OF SOCIAL COMMERCE

SOCIAL COMMERCE FEATURE	DESCRIPTION
Social sign-on	Web sites allow users to sign into their sites through their social network pages on Facebook or another social site. This allows Web sites to receive valuable social profile information from Facebook and use it in their own marketing efforts.
Collaborative shopping	Creating an environment where consumers can share their shopping experiences with one another by viewing products, chatting, or texting. Friends can chat online about brands, products, and services.
Network notification	Creating an environment where consumers can share their approval (or disapproval) of products, services, or content, or share their geo-location, perhaps a restaurant or club, with friends. Facebook's ubiquitous Like button is an example. Twitter tweets and followers are another example.
Social search (recommendations)	Enabling an environment where consumers can ask their friends for advice on purchases of products, services, and content. While Google can help you find things, social search can help you evaluate the quality of things by listening to the evaluations of your friends, or their friends. For instance, Amazon's social recommender system can use your Facebook social profile to recommend products.

ELECTRONIC COMMERCE PAYMENT SYSTEM

- The use of digital technologies to pay for product and services electronically is known as Electronic Payment System.
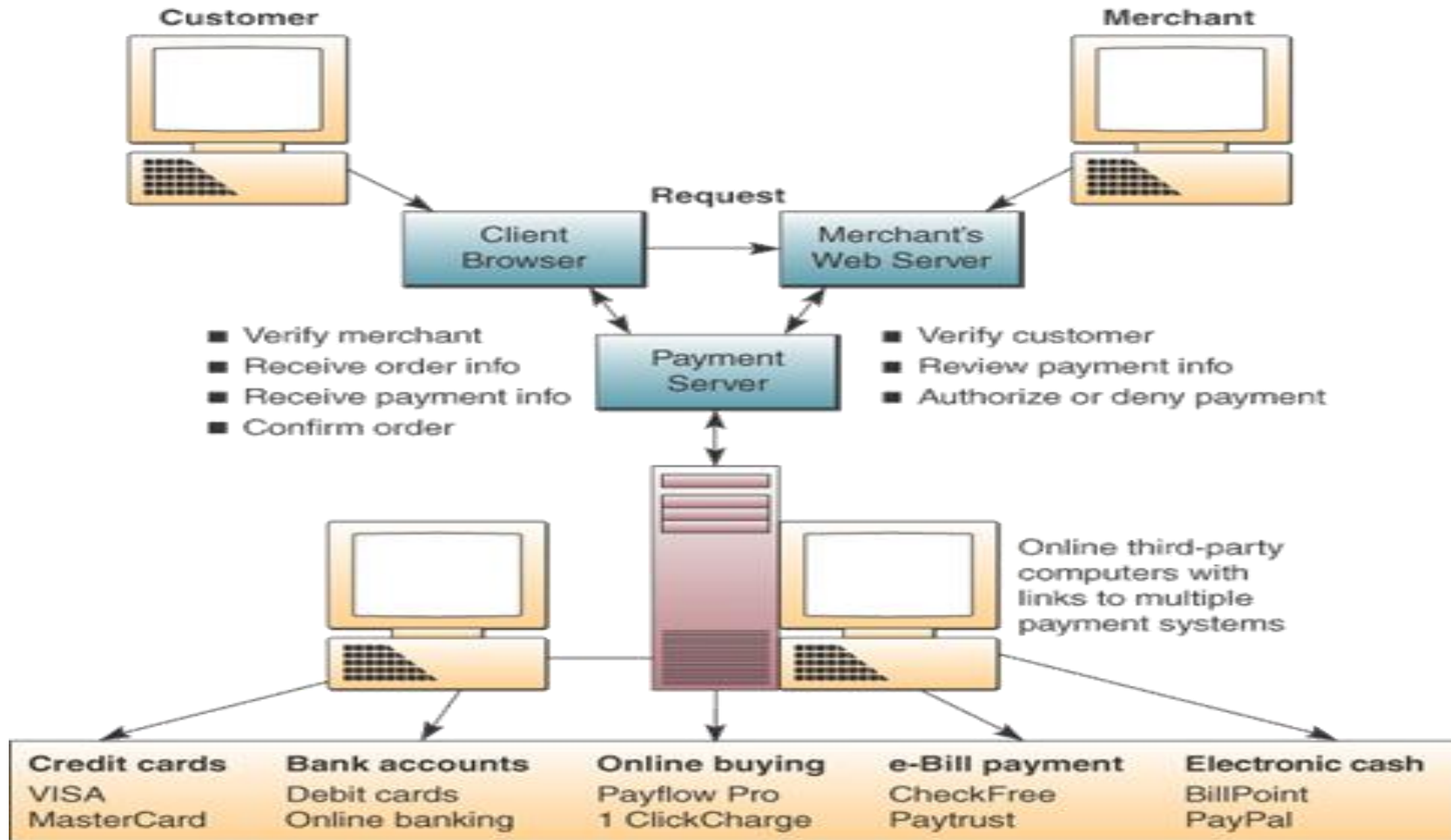
PAYMENT METHODS

- **Payment on Delivery**: In this method, payment for the goods is collected at the point of delivery by the deliverer. This is a method that has been popular with small goods sent through postal services that can be delivered by hand. This method allows for shipping as soon as the order is confirmed. In Bangladesh, this method has been adopted by some B2C vendors.

- **Payment at Bank**: In this method, after an online purchase is made, the consumer is provided with a web page containing the payment amount and some specific code or identification number for the purchase and the vendor of the item is bought from. The consumer prints out the page, and then pays the amount physically at a local bank. After the payment is transferred to the vendor's account, the vendor ships the goods.
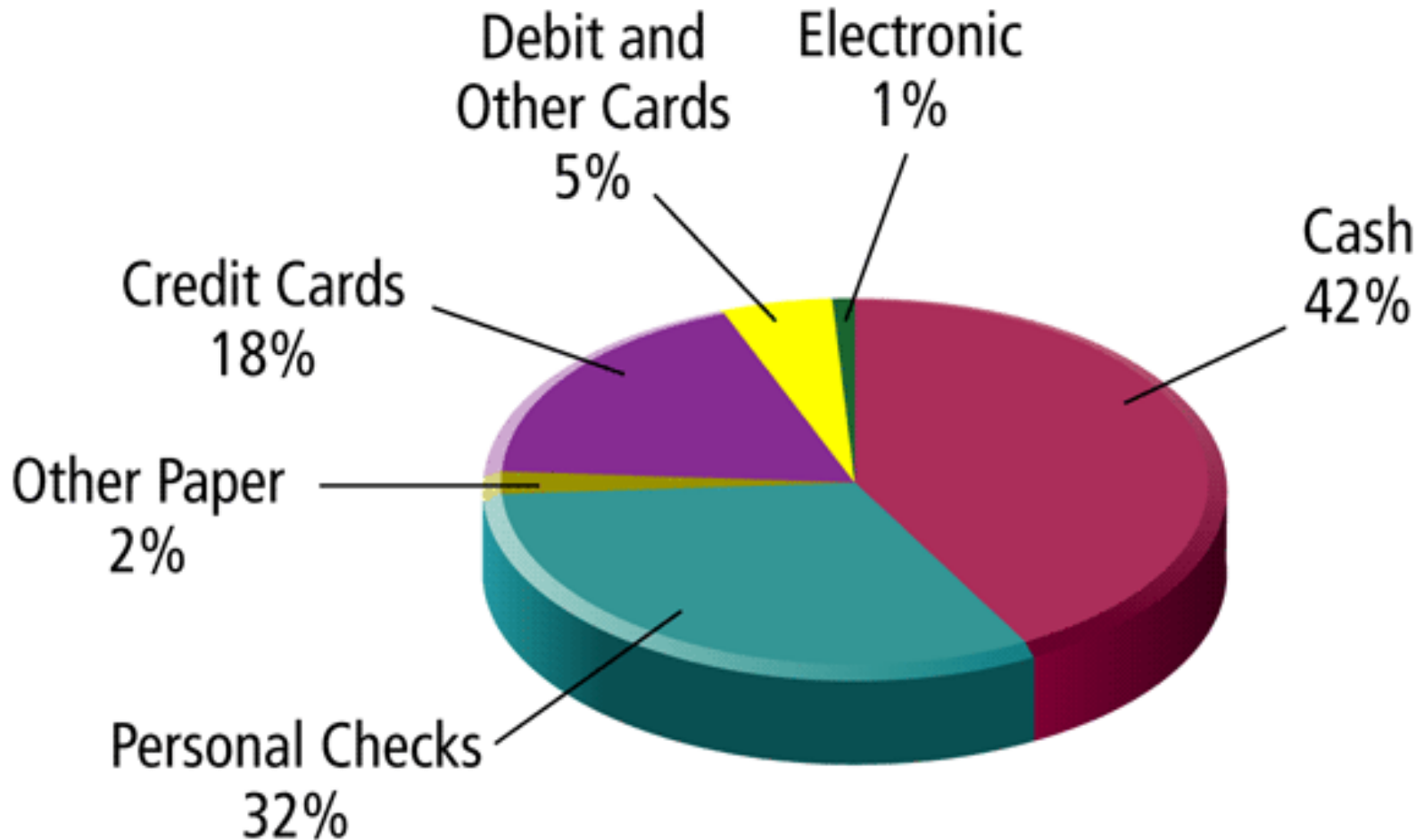
PAYMENT METHODS

- **Stored-Value Cards**: In this method, a consumer can purchase a card with a specific amount of value stored in it. The card can then be used to buy certain goods or services from the Internet, and proportionate amount gets deducted each time a purchase is made.
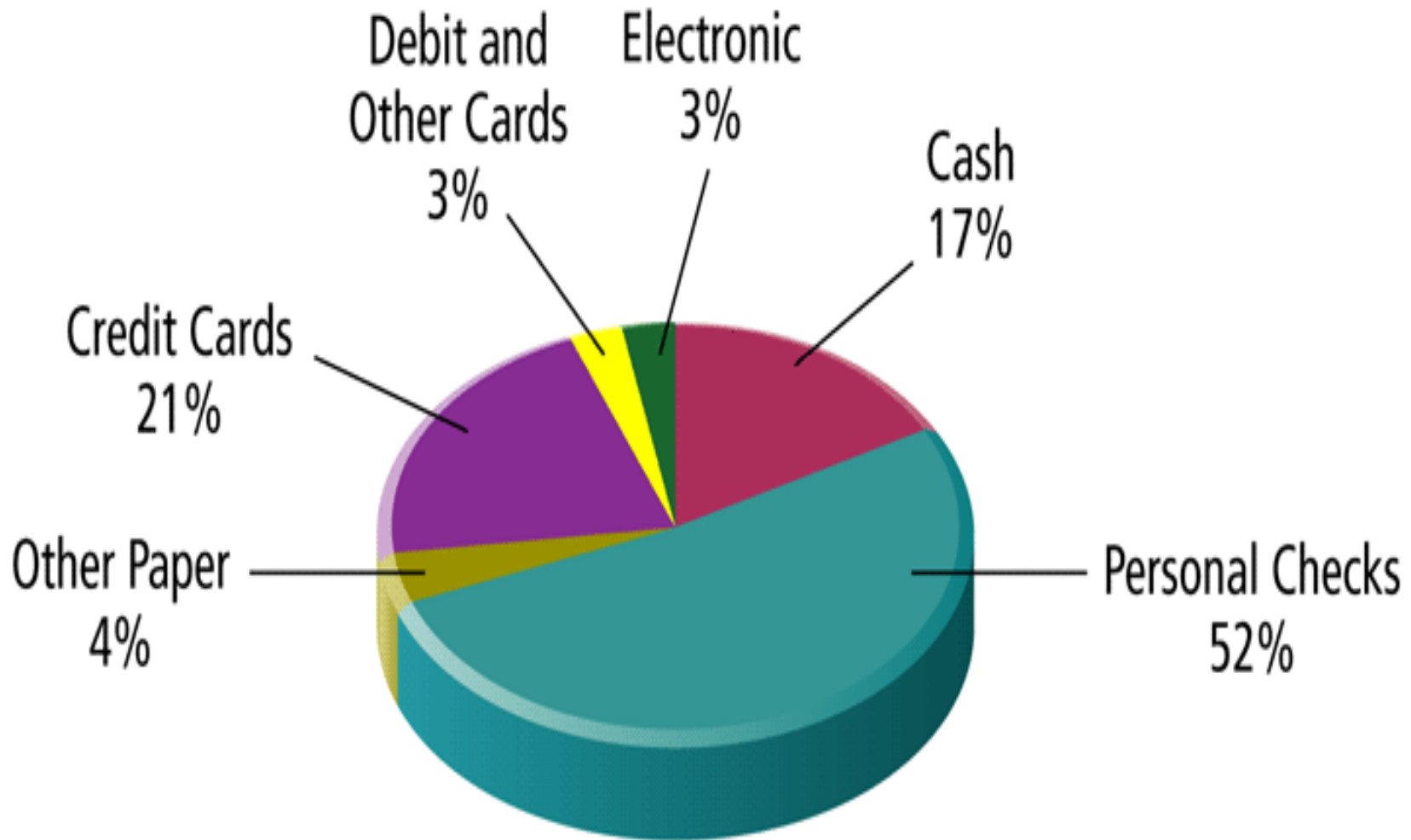
SECURITY SCHEMES IN ELECTRONIC PAYMENT SYSTEMS

- Four Essential Security Schemes
- **Authentication** – A method to verify the buyer's identity before payment is authorized.
- **Encryption** – A process of making messages unreadable except by those who have an authorized decryption key.
- **Integrity**- Ensuring that information will not be accidentally or maliciously altered or destroyed during transmission
- **Non-repudiation** – protection against customers' denial of orders placed and against merchants' denial of payments made.

MOST COMMON PAYMENT SYSTEMS, BASED ON NUMBER OR TRANSACTIONS

Debit and Other Cards 5%

Electronic 1%

Credit Cards 18%

Cash 42%

Other Paper 2%

Personal Checks 32%

43

MOST COMMON PAYMENT SYSTEMS, BASED ON AMOUNT

Debit and Other Cards 3%

Electronic 3%

Cash 17%

Credit Cards 21%

Other Paper 4%

Personal Checks 52%

44

CURRENT E-COMMERCE PAYMENT SYSTEMS

- The emergence of e-commerce has created new financial needs that in some cases cannot effectively fulfilled by traditional payment systems. E-commerce payments can be very different depending on traditions and infrastructure.
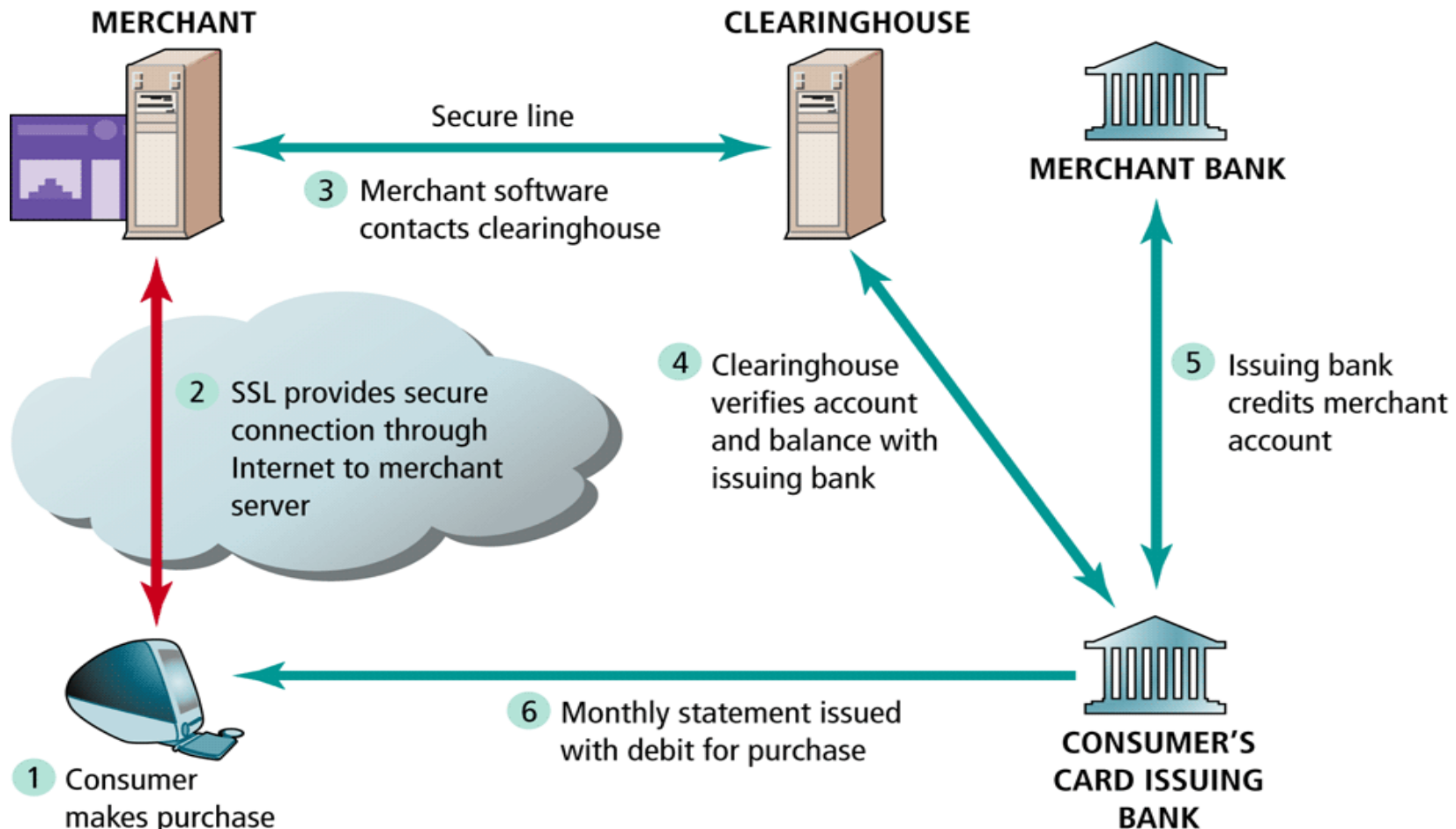
CURRENT E-COMMERCE PAYMENT SYSTEMS

- **Online credit card transaction:** Use of credit card for e-Commerce payment is one of the most major forms of electronic payment.

- It processed in much the similar way as in-store purchases are.
  - Merchant never see the actual card being used
  - No card impression is taken
  - No signature is available

46

CURRENT E-COMMERCE PAYMENT SYSTEMS

- Merchant account: A bank account that allows companies to process credit card payments and receive funds from those transactions. Credit card payments have the advantage of being simple and fast, with the added advantage that sellers can receive confirmation of payment in a very short time, prior to shipping the goods.

47

HOW AN ONLINE CREDIT CARD TRANSACTION WORKS?

MERCHANT

CLEARINGHOUSE

MERCHANT BANK

Secure line

3 Merchant software contacts clearinghouse

2 SSL provides secure connection through Internet to merchant server

4 Clearinghouse verifies account and balance with issuing bank

5 Issuing bank credits merchant account

6 Monthly statement issued with debit for purchase

1 Consumer makes purchase

CONSUMER'S CARD ISSUING BANK

48

LIMITATIONS OF ONLINE CREDIT CARD PAYMENT SYSTEMS

- Security
  - Neither the merchant not the consumer can be fully authenticated.
- Merchant Risk
  - Consumers can repudiate charges
- Cost
  - Roughly 3.5% of purchase plus transaction fee
- Social Equity
  - Young adults do not have credit cards
  - Almost 100 million adult Americans cannot afford cards or are considered poor risks

Alternative Online Payment Systems

- PayPal:
- Amazon Account
- Google Checkout
- Bill Me Later
- WUPay
- Dwolla
- Stripe

MOBILE PAYMENT SYSTEMS

- Use of mobile phones as payment devices established in Europe, Japan, South Korea
- Near field communication (NFC)
  - Short-range (2") wireless for sharing data between devices
  - Google Wallet
    - Mobile app designed to work with NFC chips

      An Android App, allow you to use credit cards. Coupons, store loyalty cards, etc.

      Without swiping each card, just tap the phone up to a payment receiver to complete a transaction.

      Help to shop online and in-store

      Allow sending money to others

- One can add money to the wallet balance from bank a/c for free, but from credit or debit card that flat rate 2.9% fee.
- One can get Google wallet card which can be used in in-store purchase.

51

DIGITAL CASH AND VIRTUAL CURRENCY

- Also called e-cash. Digital Cash generate a private form of currency that can be spent at e-commerce sites.

- An alternative payment system developed for e-commerce in which unique, authenticated tokens representing cash value are transmitted from consumers to merchants.

- Like the serial number on real currency, digital cash numbers are unique. You must have a bank a/c. When purchase digital cash certificates, money is withdrawn from the a/c.

- Buyer transfer the certificate to the vendor to pay for the products. Vendor deposits the cash number to any participating bank or retransmit it to another vendor.

- Like real cash it is anonymous and re usable.

DIGITAL CASH AND VIRTUAL CURRENCY

- Properties:
  - Security
  - Anonimity
  - Portability
  - Transferability
  - User friendly

- **Virtual Currency**: Typically circulates within an internal virtual world community or is issued by a specific corporate entity, and used to purchase virtual goods.

SMART CARDS

Smart card: It is a credit card size plastic card that stores digital information and that can be used for electronic payments in place of cash.

An electronic card containing an embedded microchip that enables predefined operations or the addition, deletion, or manipulation of information on the card.

Embedded Chip

General Guidelines to E-payment

o Use a secure web browser

o Read the website's privacy policy carefully

o Figure out the merchant's refund and return policies in advance of the final purchase.

o Investigate the trustworthiness of the merchant before you initiate a purchase.

o Keep a record of all online transactions and check e-mail and other contacts regularly.

o Review your credit card statements line by line to ensure authenticity.

DIMENSIONS OF PAYMENT SYSTEMS

TABLE 6.1	DIMENSIONS OF PAYMENT SYSTEMS				
DIMENSION	CASH	PERSONAL CHECK	CREDIT CARD	STORED VALUE (DEBIT CARD)	ACCUMULATING BALANCE
Instantly convertible without intermediation	yes	no	no	no	no
Low transaction cost for small transactions	yes	no	no	no	yes
Low transaction cost for large transactions	no	yes	yes	yes	yes
Low fixed costs for merchant	yes	yes	no	no	no
Refutable (able to be repudiated)	no	yes	yes	no (usually)	yes
Financial risk for consumer	yes	no	up to $50	limited	no
Financial risk for merchant	no	yes	yes	no	yes
Anonymous for consumer	yes	no	no	no	no
Anonymous for merchant	yes	no	no	no	no
Immediately respendable	yes	no	no	no	no
Security against unauthorized use	no	some	some	some	some
Tamper-resistant	yes	no	yes	yes	yes
Requires authentication	no	yes	yes	yes	yes
Special hardware required	no	no	yes — by merchant	yes — by merchant	yes — by merchant
Buyer keeps float	no	yes	yes	no	yes
Account required	no	yes	yes	yes	yes
Has immediate monetary value	yes	no	no	yes	no

SOURCE: Adapted from MacKie-Mason and White, 1996.

Thank You