

Introduction to Multimedia

Multimedia and Current Issues

Objectives

- Introduction to multimedia.
- Understand the applications of multimedia.
- Introduction to Virtual reality (VR).

Technology of different age

- Stone age
- Iron age
- Middle age (Feather pen & Ink)
- Industrial age/ Industrial revolution
 - Changes in agriculture, transportation, manufacturing, & mining sector.
 - Development of roads, ships, railways, electricity.
- Information Age
- Infrastructure Age

What is Multimedia?

- Combination of text, art, sound, animation, and video
- Delivered to the user by electronic or digitally manipulated means
- Interactive multimedia
 - user is given the option of controlling the elements
 - hypermedia when a user is provided a structure of linked elements for navigation

What is Multimedia?

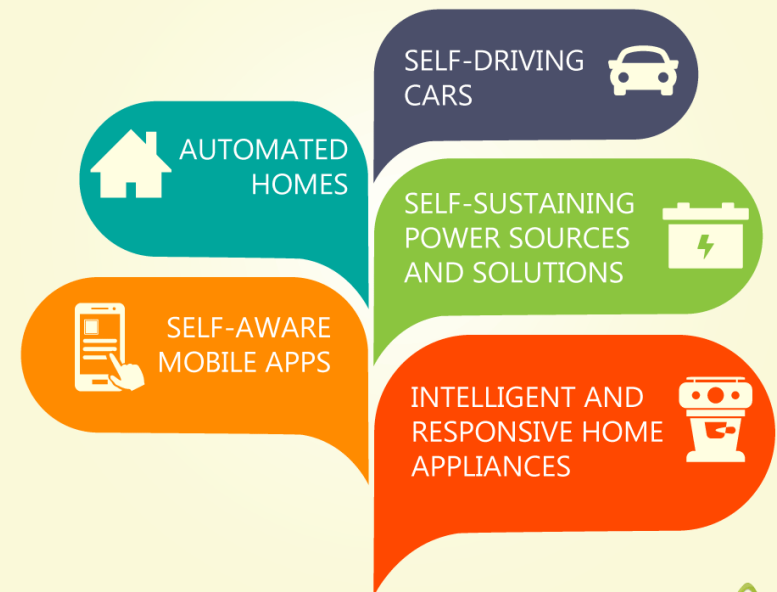
- Multimedia projects can be linear or nonlinear
- Projects that are not interactive are called linear
- Projects where users are given navigational control are called non-linear and user-interactive

Information → Infrastructure

INFORMATION AGE



INFRASTRUCTURE AGE



Authoring Tools

- Used to merge multimedia elements into a project
- Designed to manage individual multimedia elements and provide user interaction

Delivery Platform

- Online
 - Web pages
 - Information Kiosk
 - Mobile apps
 - Social Apps
- Offline
 - CD-ROM, DVD
 - Information Kiosk

Application of Multimedia

- Business
 - presentations training, marketing, advertising, product demos, databases, catalogues, instant messaging, and networked communication
- Schools
 - to enrich the learning process
- Home
 - via television sets or monitors with built-in user inputs
- Public places
 - at stand-alone terminals or kiosks to provide information and help

Mobile Multimedia Service

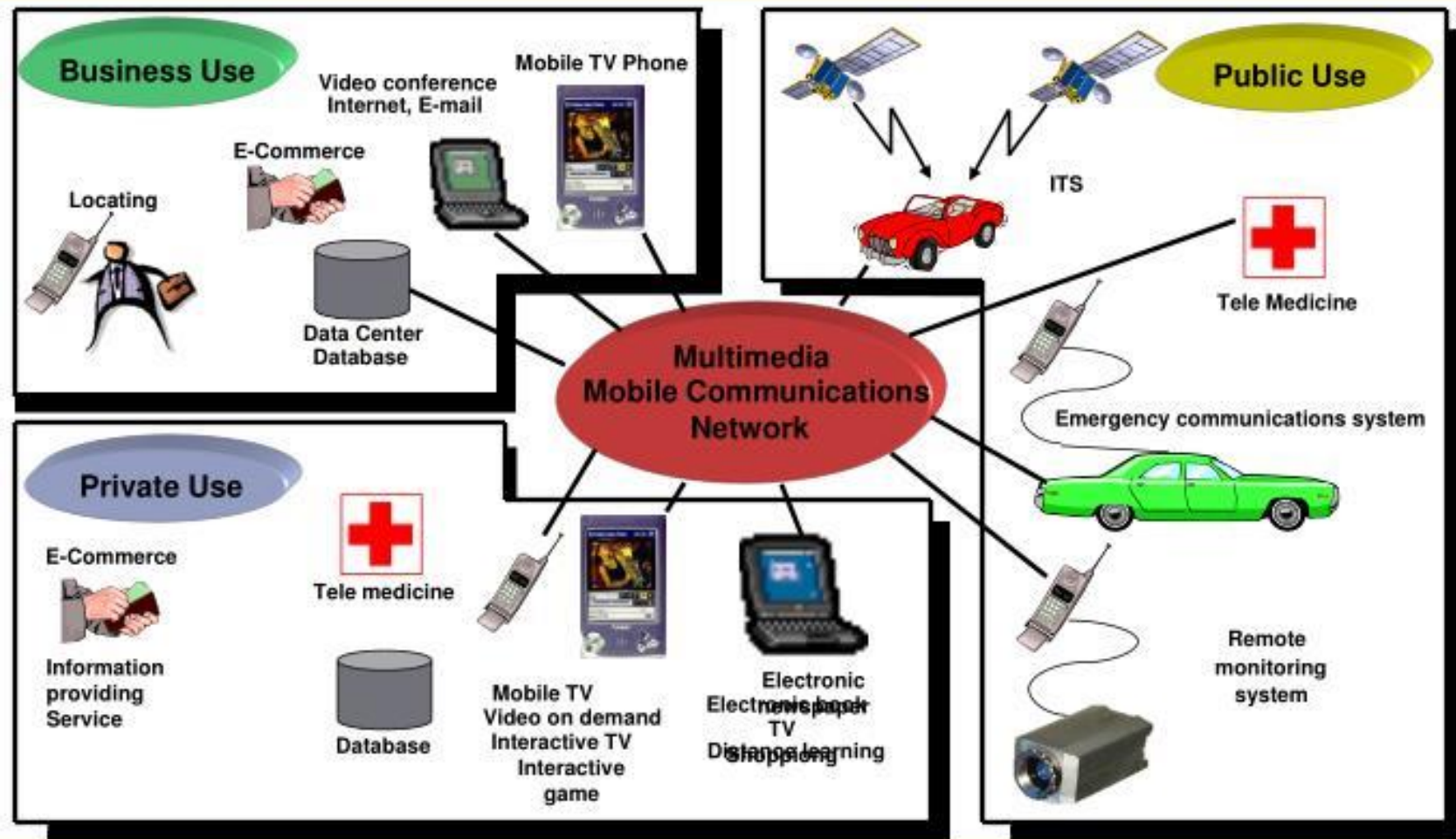
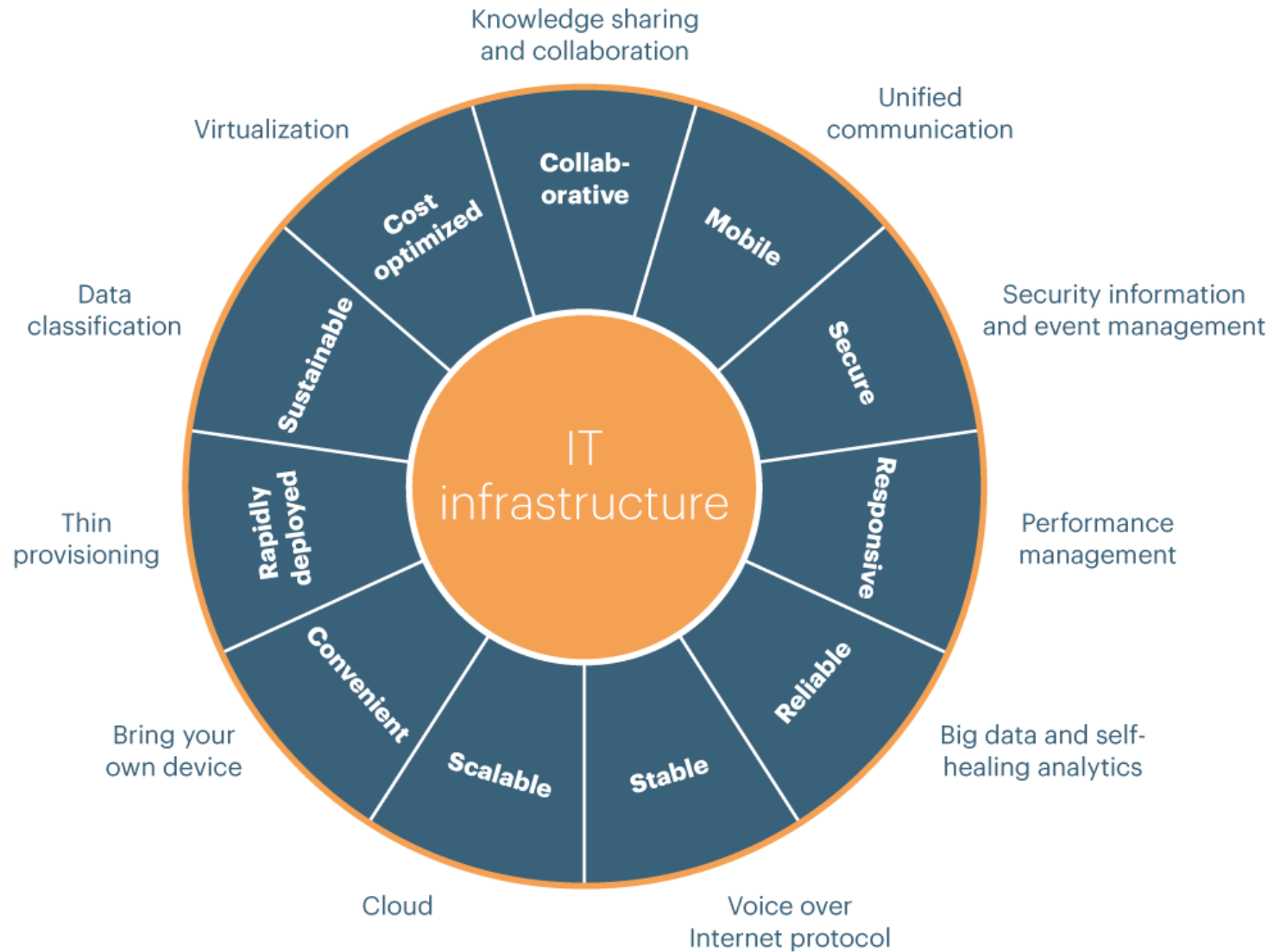


Figure 2

An effective strategy for IT infrastructure can unlock value



Virtual Reality (VR)

- Extension of multimedia
- Uses the basic multimedia elements of imagery, sound, and animation
- Requires terrific computing processing power to be realistic
- In VR, cyberspace is made up of thousands of geometric objects plotted in three-dimensional space
- The standards for transmitting VR in Virtual Reality Modeling Language (VRML) documents have been developed on the World Wide Web
- VRML documents have the file extension .wrl

Multimedia Project Production

Objectives

- Explain the stages of a multimedia project.
- Understand the requirements for a multimedia project.

Stages of Multimedia Project

- Planning and costing:
 - The needs of a project are analyzed by outlining its messages and objectives.
 - A plan that outlines the required multimedia expertise is prepared.
 - A graphic template, the structure, and navigational system are developed.
 - A time estimate and a budget are prepared.
 - A short prototype or proof-of-concept is prepared.

Stages of Multimedia Project

- Design and production:
 - The planned tasks are performed to create a finished product.
 - The product is revised, based on the continuous feedback received from the client.

Stages of Multimedia Project

- Testing
 - The program is tested to ensure that it meets the objectives of the project, works on the proposed delivery platforms, and meets the client requirements.
- Delivery
 - The final project is packaged and delivered to the end user.

Requirements for a Multimedia Project

- Hardware.
- Software.
- Creativity and organizational skills.

Hardware

- Platforms for producing
 - MacOS or MS Windows
- Platform for delivery
 - Online
 - Desktop or Kiosk
 - Mobile device
- These systems provide an easy-to-use graphical user interface (GUI).

Software

- Multimedia software provides specific instructions to the hardware for performing tasks.
- Software tools are divided into production tools and authoring tools.

Creativity and Organizational Skills

- In a multimedia project, being creative implies knowledge of hardware and software.
- It is essential to develop an organized outline detailing the skills, time, budget, tools and resources needed for the project.
- Assets such as graphics, sound and the like should be continuously monitored throughout the project's execution.
- A standardized file-naming procedure should be followed for precise organization and swift retrieval.

Multimedia Development Team

Objectives

- Understand the members of a multimedia team.
- Explain the roles and responsibilities in a multimedia team.

Members of a Multimedia Team

- A team of skilled individuals is required to create a good multimedia project.
- Team building refers to activities that help a group and its members function at optimum levels.
- The diverse range of skills required for a project is called the multimedia skillset.

Members of a Multimedia Team

- A multimedia team consists of the following:
 - Project manager
 - Multimedia designer
 - Interface designer
 - Writer
 - Video specialist
 - Audio specialist
 - Multimedia programmer
 - Producer for the Web
 - Computer programmers

Roles and Responsibilities in a Multimedia Team

- The project manager is responsible for:
 - The overall development, implementation, and day-to-day operations of the project.
 - The design and management of a project.
 - Understanding the strengths and limitations of hardware and software.
 - Ensuring people skills and organizational skills.
 - Conveying information between the team and the client.

Roles and Responsibilities in a Multimedia Team

- Multimedia designer - This team consists of:
 - Graphics designers, illustrators, animators, and image processing specialists who deal with visuals, thereby making the project appealing and aesthetic.
 - Instructional designers, are specialist in education or training and make sure that the subject matter is presented clearly for the target audience.
 - Interface designers, who devise the navigational pathways and content maps.
 - Information designers, who structure content, determine user pathways and feedback, and select presentation media.

Roles and Responsibilities in a Multimedia Team

- An interface designer is responsible for:
 - Creating a software device that organizes content, allows users to access or modify content, and presents that content on the screen.
 - Building a user-friendly interface.

Roles and Responsibilities in a Multimedia Team

- A multimedia writer is responsible for:
 - Creating characters, actions, point of view, and interactivity.
 - Writing proposals and test screens.
 - Scripting voice-overs and actors' narrations.

Roles and Responsibilities in a Multimedia Team

- A video specialist needs to understand:
 - The delivery of video files on CD, DVD, or the Web.
 - How to shoot quality video.
 - How to transfer the video footage to a computer.
 - How to edit the footage down to a final product using digital nonlinear editing system (NLE).

Roles and Responsibilities in a Multimedia Team

- An audio specialist is responsible for:
 - Locating and selecting suitable music talent.
 - Scheduling recording sessions.
 - Digitizing and editing recorded material into computer files.

Roles and Responsibilities in a Multimedia Team

- Multimedia programmer, also called a software engineer:
 - Integrates all the multimedia elements into a seamless project, using authoring systems or programming language.
 - Writes codes for the display of multimedia elements, and to control various peripheral devices.
 - Manages timings, transitions, and record keeping.

Roles and Responsibilities in a Multimedia Team

- Multimedia producer for the Web:
 - Web site producers put together a coordinated set of pages for the Web.
 - They also co-ordinate updates and changes.

Reference

- Vaughan, T (2011), Multimedia: Making it work, McGraw-Hill, USA, 8th Ed, Chapter 1.