

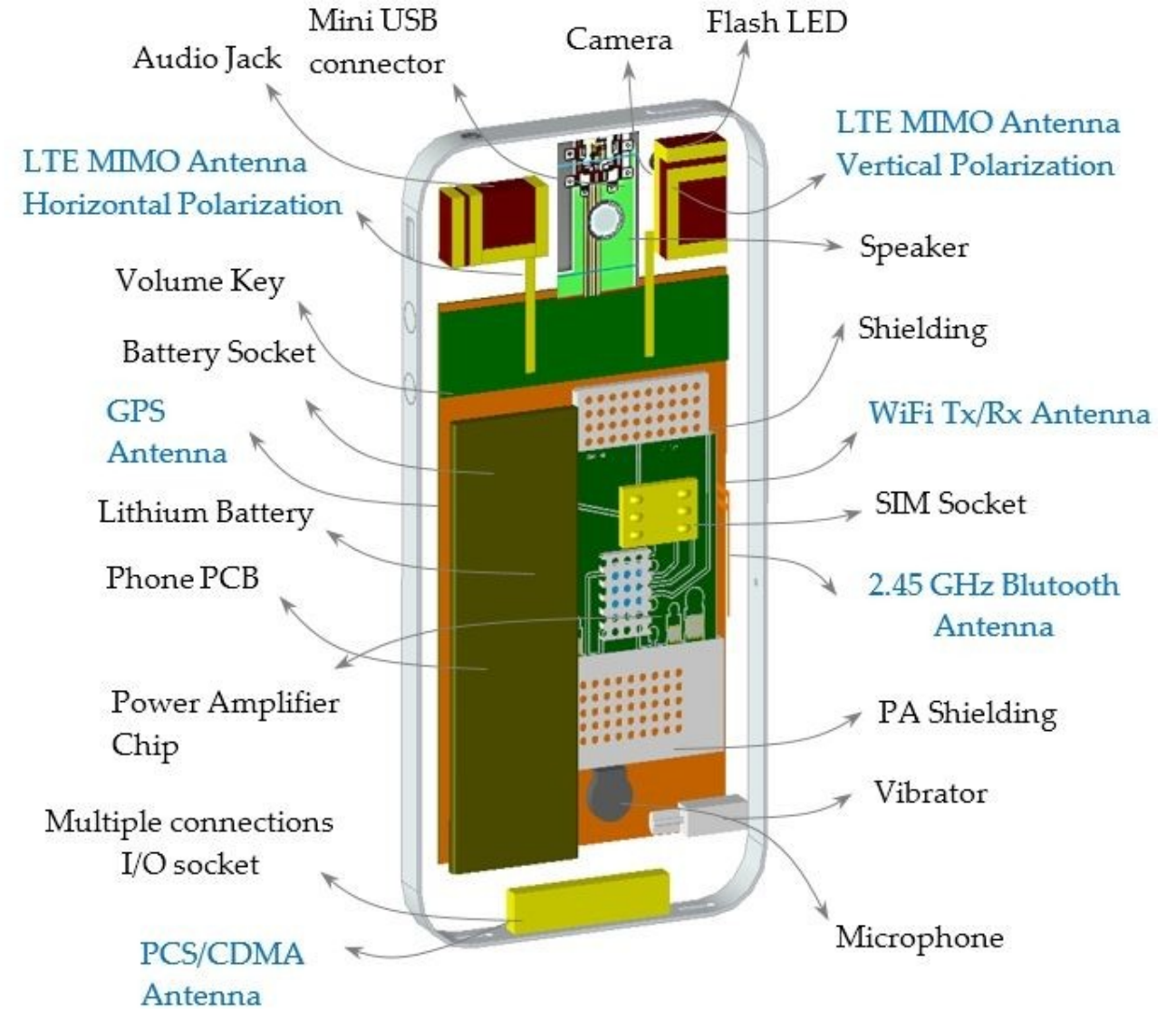
MOBILE DEVICES – PART 1

By: Dr. Fayzeh Abdulkareem Jaber

MOBILE DEVICES COMPONENTS



MOBILE DEVICES COMPONENTS



MOBILE DISPLAY TYPES



LCD (Liquid Crystal Display)



LED (Light Emitting Diode)



Retina

LCD (LIQUID CRYSTAL DISPLAY)



In the LCD display, there is a light in the background of pixels which is called a backlight that provides light to the pixels for projecting the content.



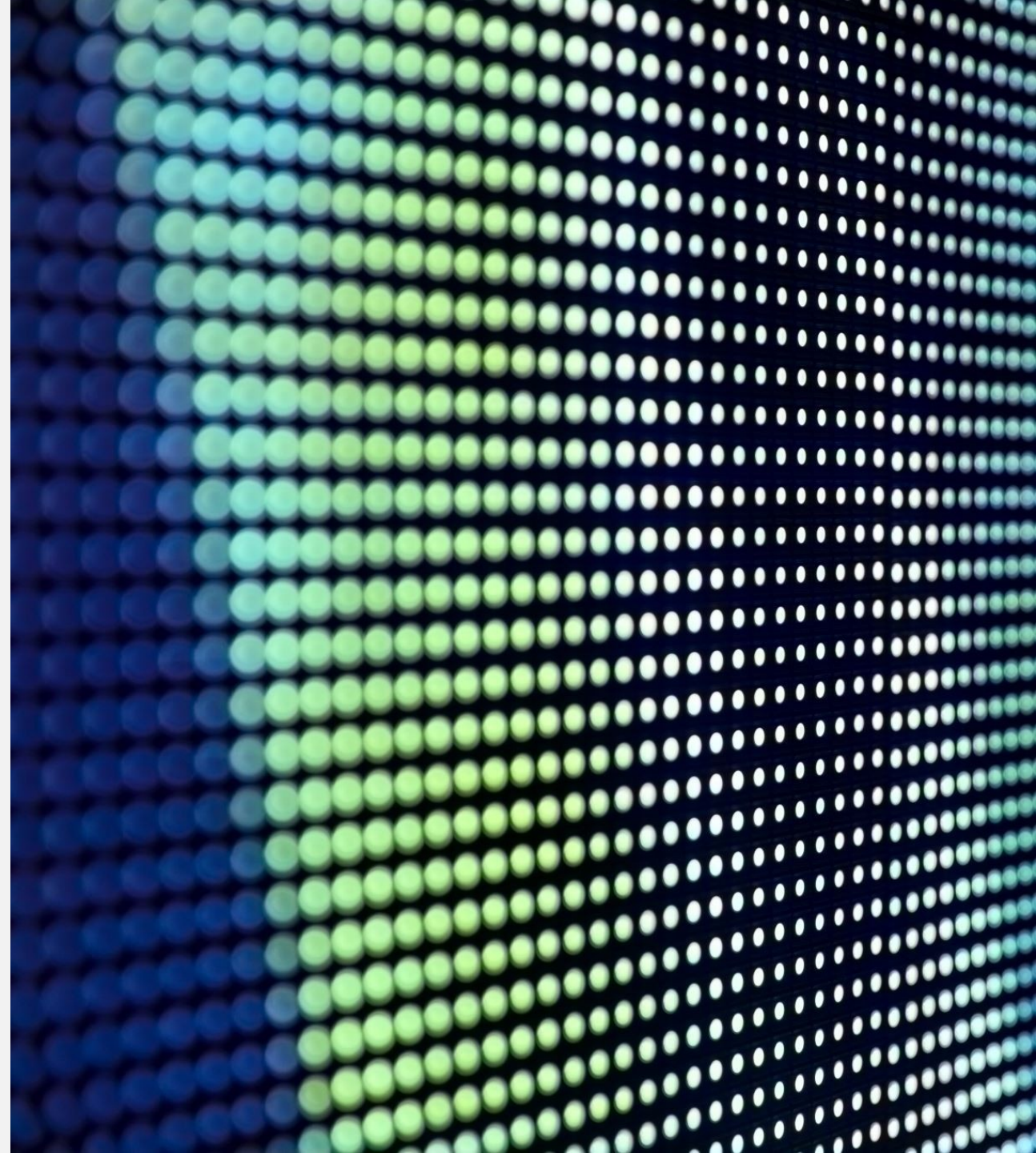
As for mobile displays, we mostly see these three displays in LCD:

TFT LCD PANEL

- Thin Film Transistor display is the cheapest display in LCD. The main advantage of this display is the high contrast ratio and very cheap to build.

Limitations :

- Poor quality
- Poor viewing angles
- Poor sunlight visibility





IPS LCD PANEL

- In-Plane Switching is the most popular display between the 10k to 20k price range in mobiles.
- This display can produce better viewing angles, best color reproduction, and direct sunlight visibility.

Limitations :

- Consumes more power

SLCD PANEL

- Super LCD is the marketing term of HTC.
- In the SLCD display, there is no gap between the outer glass and touch sensor.



LED (LIGHT EMITTING DIODE) ADVANTAGES

Consumes
Very
less power.

Best color
reproduction.

Best viewing
angles.

No limitations
for aspect
ratios.

Better
contrast
levels.

Best sunlight
visibility.

True black
colors.

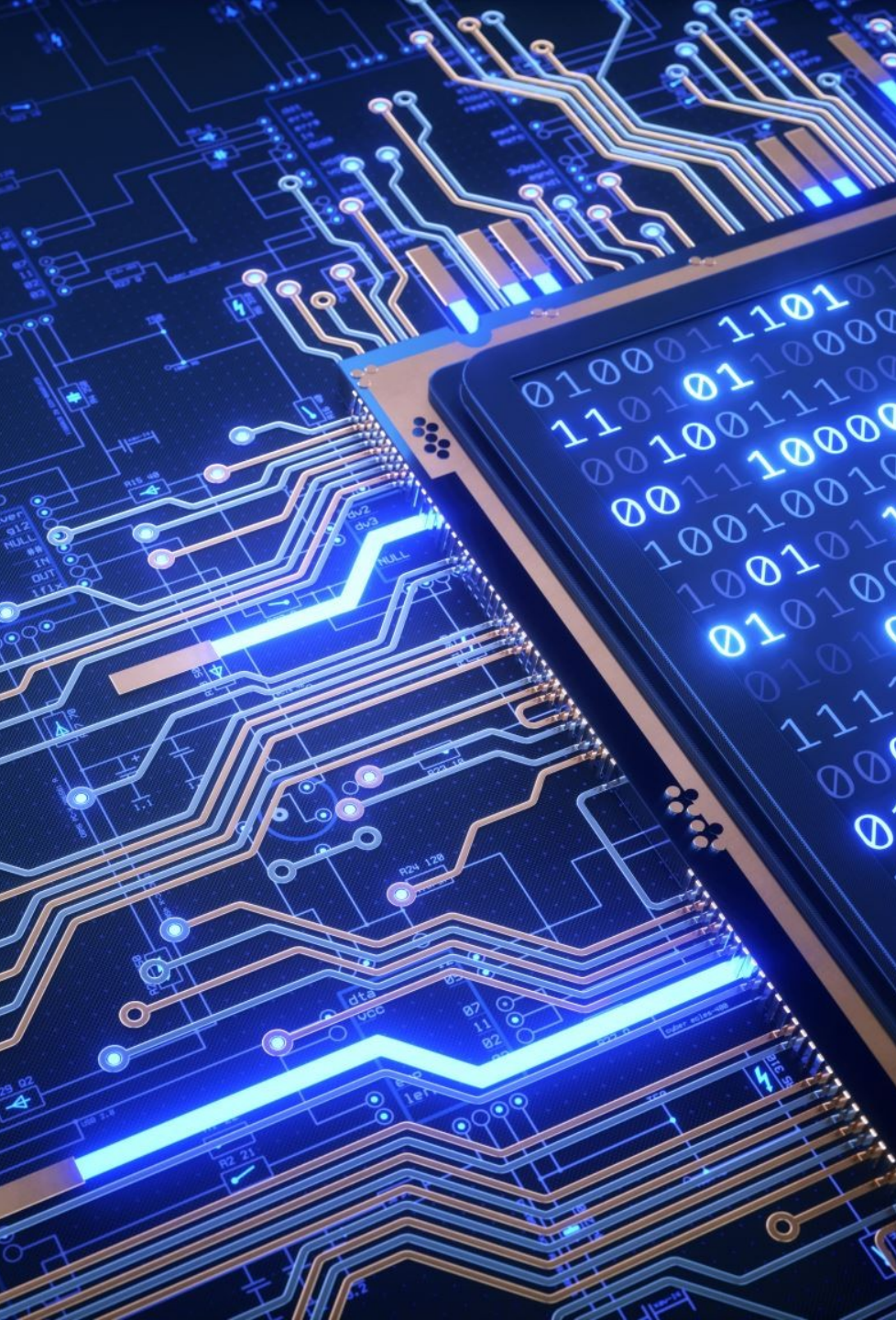
LED (LIGHT EMITTING DIODE) DISADVANTAGES

Costly to build.

two displays in the flagship category mobiles. they are, OLED and AMOLED displays.

OLED is developed by a company named LG.

AMOLED is developed by a company called Samsung.



RETINA DISPLAY

- Retina display is the trademark of the company named APPLE.
- It is an IPS LCD display only.

ADVANTAGES OF AMOLED AND OLED DISPLAYS

Best quality.

Best color reproduction.

Best color reproduction.

Best sunlight visibility.

Best sunlight visibility.

True black colors.

No limitations for aspect ratios.

Best viewing angles.

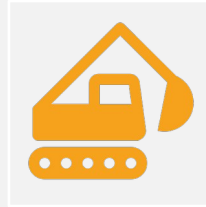
Best contrast levels.

Best battery backup.

DISADVANTAGES OF AMOLED AND OLED DISPLAYS



Screen burning issues.



Very costly to build.



Easily damaged
in contact with water.

MOBILE
DEVICE
ACCESSORIES

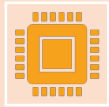




ACCESSORIES FOR YOUR SMARTPHONE

- **A selfie stick**
- **A portable power bank**
- **Headphones**
- **A waterproof case**
- **A pack of best camera lenses**

MOBILE DEVICE SYNCHRONIZATION



Synchronization occurs when a mobile device communicates with applications on a personal computer or a server.



To synchronize information on your mobile device, you either need to connect a cable or use a wireless network connection.



Data synchronization is the ongoing process of synchronizing data between two or more devices and updating changes automatically between them to maintain consistency within systems.



Application software is a type of computer program that performs a specific personal, educational, and business function.



Each application is designed to assist end-users in accomplishing a variety of tasks, which may be related to productivity, creativity, or communication.

WORKING WITH APPLICATION SOFTWARE

The Microsoft suite

- Office, Excel, Word, PowerPoint, Outlook, etc.

Internet browsers

- Firefox, Chrome, Safari, Internet Explorer

Music software

- Pandora, Apple Music, Spotify

Communication software

- Slack, Skype, Zoom, Teams

EXAMPLES OF APPLICATION SOFTWARE

TYPES OF BUSINESS APPLICATION SOFTWARE

- Business application software is a subset of the application software. These programs are built to facilitate certain business functions and improve the accuracy, efficiency, and effectiveness of operations by saving time and enhancing productivity.

ENTERPRISE RESOURCE PLANNING

- A type of business software used by companies – usually via a bundle of integrated applications – to solicit, review, store, manipulate, and analyze data derived from a variety of business operations.

CUSTOMER RELATIONSHIP MANAGEMENT

- CRM is used by companies to solicit, review, store, and analyze customer data. It also helps to manage customer interaction, facilitate the sales process, and enable relevant partner relationships.



DATABASE

- An electronic arsenal of data that a user builds in order to later access, review, and update particular pieces of information in a rapid and coherent manner.



PROJECT MANAGEMENT SOFTWARE

- A type of business software designed to plan and execute projects, and to manage the resources associated with those projects. PM software assists users with functions such as scheduling, assigning tasks, managing budgets & costs, documenting p

BUSINESS PROCESS MANAGEMENT

- BPM is designed to facilitate rapid development and automation of strategic processes and uses web-based modeling, rule creation, and a simple interface to enable the user to perform business functions more quickly.
- Usually optimized for mobile devices and offering total visibility into operations, BPM software is helpful in managing and analyzing complex data, content, and processes across the enterprise.

WHAT IS GRAPHICS SOFTWARE?

- Graphics software creates, edits, and manages two-dimensional images.
- These computer graphics may be clip art, web graphics, logos, headings, backgrounds, digital photos, or other kinds of digital images.

WHAT ARE THE TYPES OF GRAPHICS SOFTWARE?



pixel-based image editors



path-based image editors.

WHAT IS GRAPHICS SOFTWARE USED FOR?

editing and
sharing digital
photos.

creating logos.

drawing and
modifying clip
art.

creating digital
fine art.

creating web
graphics.

designing
advertisements.

product
packaging,.

touching up
scanned photos.

drawing maps
or other
diagrams.

editing video in
Photoshop.

3D drawing in
Illustrator.

THE END