

2024



CSARCH2

Exhibit Documentation

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DAY 1: sîari!



CLEAN SLATE

Initial look of the booth before set-up



READY TO GO

Finished set-up of the booth



COMPONENT LAYOUT

A closer look at what we had to offer



DAY 1: visitors



Casual Curiosity

Explaining the group's exhibit to a fellow batchmate



Passing it On

Explaining the group's exhibit to frosh students



Interaction!

Some visitors touching and interacting with the components



In the same Boat

Entertaining questions from fellow classmates/exhibitors

DAY 1: extras



When, Where, How!?

Latasha: 9:00 - 10:45 AM; 1:00 - 4:00 PM

Mezen: 9:00 - 12:00 PM; 2:00 - 4:00 PM

Krizchelle: 10:00 - 12:30 AM; 1:00 - 4:00 PM

Enrique: 10:00 - 11:00 AM; 12:30 - 1:00 PM

Patrick: 10:00 - 4:00 PM

More Snapshots



Entertaining a student & Professor Hiroki



A full view of our booth!

Entertaining multiple Visitors & getting interviewed by froshies!



DAY 2: start!



CLEAN SLATE

Initial look of the booth before set-up



READY TO GO

Finished set-up of the booth



When, Where, How!?

Latasha: 9:00 - 12:30 PM

Mezen: 9:00 - 11:00 PM; 1:00 - 2:00 PM

Krizchelle: 12:00 - 3:30 PM

Enrique: 9:00 - 3:30 PM

Patrick: 9:00 - 3:30 PM

DAY 2:visitors



Casual Curiosity

Explaining the group's exhibit to fellow batchmates



Lights, Camera, Action!

Getting interviewed by a group of froshies (CCICOMP)



Interaction!

Some visitors touching and interacting with the components



Tour Guide

Entertaining questions from a group of students

FLYER



AUDIO THRU *the Times*

Witness the evolution of audio playback devices over the years

GROUND FLOOR
HENRY SY SR. HALL

The flyer features a central collage of three circular images. The top-left image shows a close-up of a brass gramophone horn. The bottom-left image shows a clear plastic cassette tape resting on a wooden surface. The bottom-right image shows a white wireless earbud case and two earbuds on a wooden surface. The background of the flyer is a warm, brownish-orange color with decorative elements like small dots and a large quotation mark in the top right corner.

THEN

Music Box

Rediscover the magic of antique melodies through this beloved device.

Gramophone

See where audio recording and playback all began.

Classic Stereo Speakers

See the foundation of the speaker systems we've come to know and love.

Cassette Deck

Press play on the past. Rewind to the golden era of analog audio systems!

Hifi & MIDI Systems

The largest and most robust audio system for all the audiophiles at home.

NOW

iPods

The iconic media player that revolutionized the portable audio system industry.

Bluetooth Speakers

Only the best audio quality for everyone. Anytime. Anywhere.

Wireless Earphones

High-quality audio delivered straight to your ears. No strings attached.

Portable CD Player

Who said CDs were gone? Blast your favorite albums in style!

Modern Record Player

Turn the tables with this classic device that's been given a modern makeover!

LABELS



 Music Box

Learn more here!
—



 HiFi & MIDI Systems

Learn more here!
—



 Classic Stereo

Learn more here!
—



 Bluetooth Speaker

Learn more here!
—



 Modern CD Player

Learn more here!
—



 Gramophone

Learn more here!
—



 iPod

Learn more here!
—



 Cassette Deck

Learn more here!
—



 Modern Record Player

Learn more here!
—



 Wireless Earphones

Learn more here!
—



INFO CARDS

1800's Music Box

The **music box**, dating back to the 19th century, is a simple device that plays music by spinning a cylinder or a disc with tiny bumps on it.

These bumps **pluck metal pieces**, making them **vibrate and produce sounds** akin to that of music. This music then comes out of the box through a small hole.

This can be paralleled to the Von Neumann architecture as the **spinning cylinder** acts as the **storage medium/input** (containing the 'data' to be read), and the **metal pieces** as the **CPU and output device** as they 'read' the data from the cylinder, producing a sound when plucked.

Audio Thru the Times

Latasha Harwani Mezen Lababidi
Patrick Josh Leonida Enrique Lejano
Krizchelle Wong

Learn more!

1887 Gramophone

The **gramophone**, created in 1887 by Emile Berliner, was the first commercially available record player.

A gramophone primarily works by a needle **tracing the grooves of a spinning record**. This movement creates vibrations which are then amplified and output through a horn.

This can be paralleled to the Von Neumann architecture as the **record** itself can be seen as the **storage medium**, the **needle** as the **input device** and **CPU** as it 'reads' the grooves on the record, and the **horn** as the **output device**.

Audio Thru the Times

Latasha Harwani Mezen Lababidi
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Krizchelle Wong

Learn more!

1950's Stereo Speaker

Since their widespread adoption in the 1950s, **stereo speakers** have become a staple in home audio systems.

Offering excellent sound quality and riding the wave of stereo recording technology, stereo speaker setups quickly became **popular due to their relative convenience and affordability**.

The mechanism that produces sound in stereo speakers can be compared to the Von Neumann architecture as follows: the **magnet** serves as a foundational element, similar to **memory** storage in a computer, while the **voice coil** acts as the active component, akin to the **CPU** processing data. When **electrical signals** are applied, the voice coil moves, driving the **cone or diaphragm** to produce sound waves, much like an **output device**.

Audio Thru the Times

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Patrick Josh Leonida Enrique Lejano
Krizchelle Wong

Learn more!

1960's Cassette Deck

In the midst of the rise of the CD and the fall of the cassette tape, many audio systems catered to **both mediums** of audio storage.

This led to technologies such as the **early audio systems (Cassette Deck)**, which were able to play both CD and cassette tapes in one system.

In parallel to the von Neumann architecture, the **cassette tape and CD** function as **memory** storage, storing data in the form of magnetic signals encoded on the tape, or pits stored in a CD. When inserted into the deck, the **playback head** acts as the **input/output device**, reading the data from either the cassette deck or the CD player and converting them into electrical signals, similar to how data is read from and written to memory in a computer.

Audio Thru the Times

Latasha Harwani Mezen Lababidi
Patrick Josh Leonida Enrique Lejano
Krizchelle Wong

Learn more!

1980's HiFi & MIDI System

HiFi and MIDI audio systems pushed the industry even further by combining the versatility of Cassette Decks with the high-fidelity sounds of stereo speakers.

Because of their size and price, HiFi and MIDI systems were found more often in homes and entertainment venues.

These systems adhere to the Von Neumann Architecture similar to Cassette Decks, with **CDs and Cassettes** acting as **memory**, **playback heads** processing the tape/CDs as **input**, an **internal processor** to control tasks such as playing, pausing, and changing volume, and the **stereo speakers** acting as the device's **output**.

Audio Thru the Times

Latasha Harwani Mezen Lababidi
Patrick Josh Leonida Enrique Lejano
Krizchelle Wong

Learn more!

2000's iPod

The **iPod** is a portable media player created by Apple. The device primarily focused on playing music and had a click wheel for navigation.

It featured a small, lightweight design, often square or rectangular, and a color display for viewing photos and videos.

The iPod, despite its small size, still exhibits all the principles of the Von Neumann Architecture. The **3.5 mm headphone jack and click wheel** are examples of the device's **input and output** interfaces. **Memory** is also present in this device, with all models utilizing **flash memory** and most models containing up to 16 gigabytes of storage capacity. Finally, the **CPU** within the device **facilitates the communication** between all the I/O devices and the memory, while also controlling built-in software for music.

Audio Thru the Times

Latasha Harwani Mezen Lababidi
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Krizchelle Wong

Learn more!

2006 Bluetooth Speaker

Bluetooth speakers were first released in 2006 and were marketed to be the future of speakers because of the convenience that comes with their portability and accessibility.

The device allowed users to play music without having to connect to the speaker physically.

In terms of architecture, the **chipset** that handles the bluetooth connection, playing the music, and interpreting user inputs, is the **processor** of the device. Similarly, the **storage component** that stores the pairing information, device settings, and audio buffers can be considered the speaker's **memory** component. For **input**, there are button inputs for the volume, play, pause, etc. Lastly, the **speaker** itself acts as the **output device** along with any other connected devices.

Audio Thru the Times

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Krizchelle Wong

Learn more!

2010's Modern Record Player

The **modern record player**, distinct from the traditional gramophone, features built-in speakers for audio output and is designed to play vinyl records.

Mechanically, the modern record player operates by spinning a vinyl record on a turntable, with a tonearm and stylus tracking the grooves on the record. As the stylus moves along the grooves, it vibrates, producing electrical signals that are amplified and played through the built-in speakers.

This mechanism can be paralleled to the Von Neumann architecture as the **record** itself can be seen as the **storage medium**, the **tonearm/stylus** as the **input device/reader**, and the **cartridge** (that converts the vibrations to electrical signals) as the **CPU**.

Audio Thru the Times

Latasha Harwani Mezen Lababidi
Patrick Josh Leonida Enrique Lejano
Krizchelle Wong

Learn more!

2010's Modern CD players

The Sony Discman was one of the most popular **portable CD players** in the 80s. Although CDs are no longer as popular now, modern CD players still serve the same purpose as the Discman, only now it has a few more additional features that make it more modern.

Regarding the architecture within the CD player, in terms of **CPU** and processing units, it can be seen in the **unit** responsible for managing the various functions and capabilities of the device. (reading and interpreting the data from the CDs, processing of the audio signals, etc). In terms of **memory**, the **storage** for the firmware, settings, and buffer for audio data could be treated as its storage device. Lastly, in terms of **input and output**, the **CD player** itself could be treated as the output device with the AUX, bluetooth connectivity, and USB port serving as additional input/output devices.

Learn more!