

HARMONY OS

Ang HarmonyOS ay isang operating system mula sa Huawei na nagbibigay ng secured at maayos na experience sa mga gadgets tulad ng smartphones, smart home gadgets, at IoT devices. And consistent din yung user interface nito para ma-enhance yung connectivity and usability sa iba't ibang device types.

KEY TECHNOLOGIES

🔗 **Microkernel-Based OS:** HarmonyOS is built on a microkernel architecture, which means it has a minimal core kernel responsible for essential system functions.

🔗 **Programming Languages:**

- **C and C++:** These languages are used for low-level system programming, providing the performance and efficiency needed for core system components and high-performance applications.
- **Java:** This language is used for developing applications, offering a high level of abstraction and ease of development.

🔗 **Development Tools:**

- **DevEco Studio:** This is Huawei's integrated development environment (IDE) for creating applications on HarmonyOS. It provides tools and features for coding, debugging, and testing applications across different device types.
- **HarmonyOS SDK:** The Software Development Kit (SDK) includes libraries, APIs, and documentation needed for developers to build apps that are compatible with HarmonyOS.

🔗 **App Store:**

- **Huawei AppGallery:** This is Huawei's official app store where users can download and install applications designed for HarmonyOS. It serves as the distribution platform for apps within the HarmonyOS ecosystem.

POPULAR USE CASE

HarmonyOS is widely used in mobile devices like smartphones and tablets, offering a smooth and efficient experience. It also connects well with smart home gadgets and IoT devices, such as smart TVs and wearables. Plus, it supports mobile apps in areas where Huawei devices are popular, making it a versatile platform for many types of applications.

PROS

1. Ibig sabihin ay may pagkakapare pareho ang interface ng lahat ng devices ng Harmony OS, cellphone man ito or kahit anong smart gadgets.
2. Ang microkernel is naka separate yung operation ng essential functions na kailangan ng operating system at ng ibang applications at services kaya mas napapanilis nito ang performance ng isang device.

3. Usable sya kahit walang google. This is particularly beneficial in regions where Google Play is not available or restricted, as it allows users to access apps and services without needing Google's infrastructure.

CONS

1. HarmonyOS has fewer apps available compared to Android and iOS, which means users might not find all the apps they are used to or need.
2. HarmonyOS is strongest in China and some specific regions, which means it has less presence and support in other parts of the world.
3. Adapting existing Android or iOS apps to HarmonyOS can be challenging for developers. This is because they need to adjust their apps to fit HarmonyOS's architecture and development environment, which can involve extra work and resources.

SYMBIAN OS

Symbian OS is the operating system of Nokia. It aimed to provide a robust and flexible operating system for early smartphones, supporting a wide range of hardware and user needs. It offered a stable and customizable platform during its peak, before the rise of Android and iOS.

KEY TECHNOLOGIES

1. **Proprietary OS with a Real-Time Kernel:** Symbian OS is a proprietary operating system with a real-time kernel, allowing it to manage tasks and processes efficiently and reliably, crucial for early smartphones.
2. **Programming Languages:** It primarily uses C++ for high-performance application development and Python for easier scripting and application creation.
3. **Development Tools:** Developers use **Nokia Developer Tools** and **Qt SDK** to create and manage applications, providing resources and libraries to facilitate development.
4. **App Store:** Originally, Symbian OS applications were distributed through the **Ovi Store**, which was later replaced by the **Nokia Store**, where users could download and install apps.

POPULAR USE CASE

PROS

1. **Highly Customizable and Flexible:** Symbian OS could be extensively customized, allowing users and manufacturers to adjust the system to their preferences.
2. **Strong Support for Various Hardware:** It worked well with many types of hardware, making it adaptable to different devices.
3. **Rich History of Applications and Developer Support:** Symbian OS had a lot of apps and developer support, providing a solid base for software and tools.

CONS

1. **Fragmentation and Inconsistent User Experience:** Symbian OS's flexibility caused different experiences on various devices, leading to a lack of consistency.
2. **Decline in Popularity:** With iOS and Android becoming more popular, Symbian OS lost its importance and user base.

3. **Limited Support and Updates:** Symbian OS had fewer updates and less support, making it less reliable and secure over time.

WINDOWS PHONE

Windows Phone OS aimed to seamlessly integrate with Microsoft's ecosystem, focusing on productivity and smooth connectivity with Windows PCs. It was designed to offer a consistent and efficient user experience for those using Microsoft products.

KEY TECHNOLOGIES

1. **OS: Proprietary, developed by Microsoft:** Windows Phone OS is a closed-source operating system created by Microsoft specifically for its mobile devices.
2. **Programming Languages: C#, XAML:** Apps for Windows Phone OS are primarily developed using **C#** for coding and **XAML** for designing user interfaces.
3. **Development Tools: Visual Studio, Windows Phone SDK:** Developers use **Visual Studio** as their main IDE and the **Windows Phone SDK** for tools and libraries needed to build and test applications.
4. **App Store: Microsoft Store:** Applications for Windows Phone OS are distributed through the **Microsoft Store**, where users can browse, download, and install apps.

POPULAR USE CASE

PROS

1. **Tight Integration with Microsoft Services:** Windows Phone OS worked well with Microsoft services like Office and OneDrive, making it easy to manage documents and files across different devices.
2. **Unique UI with Live Tiles:** It had a distinctive interface with live tiles on the home screen, showing real-time updates and providing a visually interesting way to use apps and view information.
3. **Consistent Experience Across Devices:** The operating system offered a similar experience on various Microsoft devices, so users enjoyed a uniform interface and functionality whether using a phone, tablet, or PC.

CONS

1. **Limited App Ecosystem:** Windows Phone OS had fewer apps compared to iOS and Android, which restricted the variety of apps available to users.
2. **Poor Market Penetration and Developer Support:** It had a small market share and low interest from developers, leading to fewer updates and new apps.
3. **Discontinued Support:** The operating system was discontinued when Windows 10 Mobile support ended, meaning users no longer received updates or new features.