

Five Unique Operating Systems

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On Time/Format	1	
Correct	5	
Clear	2	
Concise	2	
TOTAL	10	

ABSTRACT

This paper discusses five unique operating systems that are not Windows, Linux, or Unix-based.

Keywords

Operating System, Unique

1. INTRODUCTION

The most commonly used operating systems, in both the personal and corporate worlds, are based on the Windows, Linux, or Unix kernels. However, there are dozens of operating systems still in use today that are, embedded, real-time, written directly to the machine, and even based on particular programming languages.

2. VXWORKS

VxWorks is a real-time operating system developed by Wind River Systems, a company that is now owned by Intel. Since 1985, VxWorks has been designed for use on embedded systems, and it is currently used to host and manage such notable hardware as Linksys wireless routers, PostScript Xerox printers, ReplayTV home video recorders, BMWs iDrive systems, and Boeing cockpits.

3. ROCKBOX

RockBox is a portable operating system that has the ability to run on many digital audio players. RockBox features a simplistic yet feature-rich user interface that allows for gapless playback, cross-fading, FM radio (on supporting devices), remote control support, and many other features both common and foreign to standard digital audio players. Notable audio players that have been tested and function properly when using RockBox are the iRiver, all current generations of the iPod, Sansa, and the Archos Jukebox.

4. ROBOT OPERATING SYSTEM

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ROS (Robotic Operating System) is an operating system for devices which its name would imply: robots. ROS provides advanced robots with the ability to be able to maneuver in known and unknown environments, recognize speech, and identify visual objects. ROS was first introduced in the 1990s by Animusoft Corporation.

5. INTEGRITY

Having been certified by the NSA, Integrity is the most secure technology in the world today. It is known for its use of memory protection to isolate and protect itself from accidental errors and malicious tampering. It is a real-time operating system that has support for most standardized external components such as wired/wireless networking, USB, and graphics support. Integrity's kernel doesn't support high risk features, such as dynamic memory allocation, thereby guaranteeing bounded computation times and eliminating many potentially malicious memory errors.

6. MICROC/OS-II

Written mainly in the C programming language, MicroC/OS-II is a intended for use in embedded systems. It is a low-cost priority-based real-time operating system that communicates directly with the microprocessor. First developed in 1992, it is currently in its second distribution of the kernel (thus rendering the II) and is maintained by Micrium, Inc.

7. CONCLUSIONS

Operating systems written on kernels other than Windows, Unix, or Linux are found primarily in portable or embedded systems, but there are numerous systems developed for high-level computer processors as well. Though the norm for domestic operating systems will always be primarily Windows and Unix-based (with several cases of Linux thrown in as well), the lesser known (and potentially more powerful) operating systems have their places as well.