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Abstract
For embedded systems, they are mostly applied in specific applications. If the kernel of embedded systems can be adaptable and flexible enough, it benefits on efforts of porting to variable target systems. The development time and cost can therefore be reduced. As to the storage, there are more and more requirement regarding the scale and the speed. For embedded applications, Flash devices may be the first consideration. They gain advantages of high-speed and environment durability. However, considering their limitation on write count and cost, storages of hard drive still have their competitive strength, especially in some areas needing a great lot of storage. This article uses and discusses implementation techniques of storages using hard drives.
The prototype is based on HS2 (Hot Swap System) system with modularized micro-kernel architecture. HS2 features modularizing everything, including kernel modules and application modules. Each module can be added, deleted and moved by a remote HS-console. The storage mechanism is added in HS2 and acts as the role of storage device. The architecture is supposed to be the early phase of future OSD, i.e. Object Storage Device. This thesis discusses issues of storage in embedded systems, and implements FAT+ disk format to support storage access in the HS2 environment.
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