基于Linux的DLNA音视频推送系统设计

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[摘要]在计算机相关产业飞速发展的时代，家庭局域网中嵌入式设备之间的通信逐渐成为计算机领域的研究热点。与此同时，人们迫切需要在家庭网络中完成嵌入式设备的互联互通。

而嵌入式设备在家庭网络中的互连是家庭局域网的主干技术，UPnP（Universal Plug and Play，简称 UPnP）的推出实际上是扩大了传统单机的设备和计算机操作系统的概念，在"零配置"的前提下提供了局域网中连网设备之间的发现、接口声明和其余信息的交流以及互动操作的功能。在典型的 UPnP AV 应用架构中 DLNA 是一种解决嵌入式设备在家庭局域网实现互联的广泛解决方案，同时也是协议，DLNA（Digital Living Network Alliance，简称 DLNA）协议定义了一种通用的行业规范，旨在使电子设备更容易共享相片、视频、音乐等多媒体内容。

本文介绍了 UPnP AV 应用框架中 DLNA 协议实现家庭局域网中嵌入式设备互联和资源共享的基本工作流程。之后，通过 DLNA 检测搭建的模拟环境，将环境中一个设备上的音乐、视频等资源，通过以 UPnP 作为家庭局域网中媒介，实现在另外一个设备上播放和查看推送的资源。

[关键词] UPnP　DLNA　家庭局域网　嵌入式

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Design of Audio and Video Push Based on Embedded

[Abstract] In the era of rapid development of computer-related industries, making home-based LAN-based embedded system communications has become a hot research in the field of computer. At the same time, when the home network to achieve the interconnection of embedded devices has become an urgent need.

The realization of the home network in the embedded device interconnection is the backbone of home LAN technology, UPnP (Universal Plug and Play) is actually the emergence of the traditional stand-alone equipment and computer systems, the concept of "zero configuration" under the premise of providing networking equipment The discovery of interfaces, interface and other information exchange statements and other interactive operating functions. In a typical UPnP AV application architecture, DLNA(Digital Living Network Alliance) is a broad solution for interconnecting embedded devices in the home LAN. It is also a protocol. The DLNA protocol defines a common industry specification that allows electronic devices to be easily interoperable Sharing photos, videos, music and other multimedia content.

In this paper, the basic work flow of embedded device interconnection and resource sharing in home LAN based on DLNA protocol in UPnP AV application

framework is introduced. Then, through the DLNA detection to build the simulation environment, the environment of a device on the music, video and other resources, through the UPnP as a home LAN media, in another device to play and view the push of resources.

[Keywords] UPnP, DLNA, home network, embedded

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