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厦 门 大 学  
硕 士 学 位 论 文

用 GSM 手机模块设计无线桌面机  
——软件部分

Using GSM Mobile Telephone Module to Design  
Wireless Desktop Telephone——Software Part

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## 摘 要

年 内 GSM  
GSM 内 人 密 部分 手  
机 人 人  
部分 手机 件 手机模块软件  
手机 门 面 手机模块软件  
人 人机 面 MM 软件 用手机  
模块 无线桌面机 设计 手机模块软件 MM 软件 软  
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CD 设计 密  
G 模块  
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论

**关键词：** GSM 无线桌面机 MM 软件 软件 MS

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## Abstract

In recent years when mobile communication is developing at fast speed in the global space GSM mobile terminal which is regarded as the consanguineous part of GSM net and human is increasing at a burst of speed. Now because it have the ability of suiting for people's everyday requirements mobile telephone gradually becomes a indispensable part of human life. Mobile telephone's various function is realized by mobile telephone module's software which is supported by hardware and network. Its abundant function and interface is completed by man-machine interface (MMI) and bottom driver software. So the design of MMI software and bottom driver software in mobile telephone module's software becomes the key of realizing mobile telephone's function.

The paper's emphasis is how to design mobile telephone module's MMI software and bottom driver software to realize functional requirements of wireless desktop telephone. Firstly the paper introduces wireless desktop telephone's hardware kernel- mobile telephone module's hardware configuration then analyzes baseband chip in mobile telephone module's hardware in detail. In baseband chip this paper expounds respectively the function and peripheral of C166 controller core and DSP coprocessor core and introduces the flow that DSP deals with voice signal. Then it establishes wireless desktop telephone's software structure according to demo code which is supported by chip factory. And in MMI software it analyzes the flow that MMI handles the signal of pressing key. Then the paper analyzes hardware

driver module and expounds every module in detail. After that, it analyzes every module in relation to wireless desktop telephone at length and describes function of every file. Secondly according to wireless desktop telephone's characteristic, this paper designs menu function keyboard driver and handle LCD driver and display in the wireless desktop telephone's software and completes the design the function of message encryption and simple voice data encryption, as well as how to realize the function of GPIO port. Finally, the paper introduces development environment of mobile telephone's software and provides simulator results.

Furthermore the paper analyzes wireless desktop telephone's principle of generating echo. Then it finishes how to design hardware and software on DSK6711 board to realize BLMS arithmetic's emulator. It get the parameters in relation to echo cancellation effect. Finally the paper compares BLMS arithmetic with LMS arithmetic and enduces conclusion.

**Key words:** GSM Wireless Desktop Telephone MMI(Man-Machine Interface)  
Software Bottom Driver Software Echo Cancellation BLMS  
arithmetic



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