RESEARCH ARTICLE

THE USE OF SMS ON THE PLATFORM OF IPTV REGULATION

Xu Lu, *Hongwei Ding, Jia Guo, Yong Wang and Shengjie Zhou

School of Information, Yunnan University, Kunming, Yunnan, China

A R T I C L E   I N F O

A B S T R A C T

With the advent of the era of 4 g, mobile TV has been further development. More and more users watch videos by using mobile phones, good and bad are intermingled in the content of watching, in order to spread good videos, there is a guide the public accept positive and healthy thoughts, Spread the positive energy, supervision department need to monitor the contents of watching, especially to remind users stopping to watch who watching illegal programs. Considering that the user watch videos by using of mobile phones, so adding the function of automatic text in the regulatory platform. Sending text messages to remind users stopping to watch programs when retrieving users watching illegal programs. Automatic text can also be used for other aspects of supervising users, supervision department can immediately sent text messages to remind the users when users have illegal operations that are detected.

INTRODUCTION

IPTV(Internet Protocol Television).The construction and research of mobile phone television monitoring and management platform has become an important part of the pilot area of three networks convergence, after nearly three years of construction, the first batch of pilot area (city) IPTV, mobile phone TV monitoring platform initially built[1]. The second batch of pilot area(city) the supervision platform under construction, due to the current IPTV, mobile phone TV monitoring platform construction scheme is not mature, especially for mobile phone TV monitoring is still in the exploratory stage. Therefore the analysis research of related technology of IPTV, mobile phone TV monitoring platform, technology improvement to the existing regulatory scheme, comprehensive regulatory simulation platform IPTV implementation is very important for the second batch of pilot city and the future development of IPTV, mobile phone television business city with reference and guiding significance.

In January 21, 2010, the state council issued on the issued by the state council to promote the overall scheme of the nets fusion notice issued. Notice clearly stipulates: by 2015,the telecommunication network, broadcast television network, Internet fusion development, new information products and services are constantly emerging, network utilization rate increasing, the ability of technology innovation is obviously enhanced, the national economic and social informatization level of the rapid increase of network economic and social information security, security and cultural security capacity further enhanced, further development of the information industry, cultural industries and social undertakings, to further the prosperity of socialist culture, the masses of the people enjoy more rich and varied, fast and economic information and cultural services[2] IPTV, mobile phone television business responsible for supervision department. Propaganda Department guidance.

With the "three screen" the fusion technology is gradually thorough, the IPTV and HTML2.0 technology has been widely applied in this framework, users can in the computer, television, mobile phone browser to facilitate the management of their own TV interface resources, pay the corresponding TV and watch.

To realize the automatic of illegal intervention programs, and alarm reminder application in supervision platform is also important. This function is to make the supervision platform more perfect, and further guide the mass thinking positive and healthy, spread positive energy.

Hardware and software to use on the function of platform

The GSM module

Using the SIM900A module of SIMCOM Company, the module is fully using the SMT package form, stable performance. SIM900A uses industry standard interface, the frequency of 900Mhz and 1800Mhz, embedded TCP/IP protocol, can be low power implementation of speech, text message(SMS),the transmission of data and fax information. Switch timing (figure 1) is as follows:

Serial debugging assistant

Serial debugging assistant serial debug tools. Experiments using serial debugging assistant(support 9600 19200 38400 used a variety of baud rate and custom baud rate), can automatically identify the serial port settings, parity, data bits
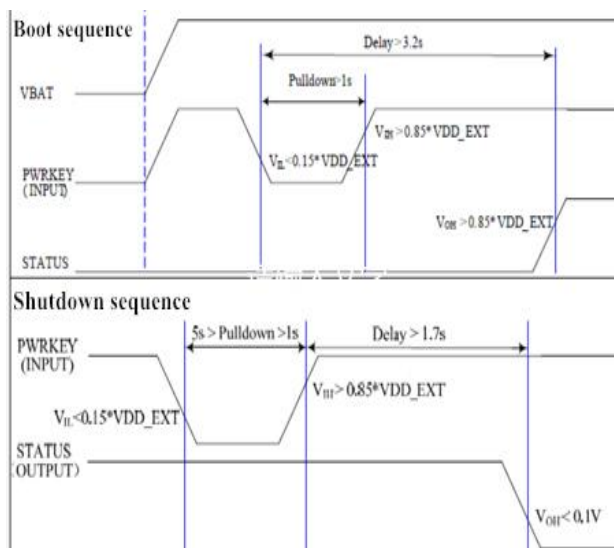
Figure 1 Boot sequence and shutdown sequence of the GSM

and stop bits, to sixteen hexadecimal ASSCII code or receiving or sending any data or character. Can be arbitrarily set automatic transmission period, and can receive data saved as a text file, any size can send text file [3]. It can be compatible with a variety of systems: Win8.1, Win8, Win7, Win2003,Win xp etc...

Programming to realize automatic text and encapsulate it into software

Programming design the control system for the serial debugging assistants in order to achieve the purpose for automatic text which in c + + environment. The automatic text messaging software can completely replace the human to the operation of the serial debugger. And the content of the text messages can automatically send after writing in the program. If the content of the text is changed directly in the program to rewrite the corresponding text content, there will be implemented in one or more mobile phone text messaging.

Programming open and control "serial debugging assistant". In c + + programming to realize the mouse of double-click to open the function of a software. Complete the function need to download the "serial debugging assistant" and place it in a specific location, which can realize the location of the software written in c + + program and open it . In order to achieve the control button and contents of the need to get box address by using "serial debugging assistant". It need the address and programming to realize the mouse click on the button and keyboard manual input function. Also note that in the design of call software running speed and the speed of the program is running. If the relationship between if the two speed cannot match which cannot realize the function of control it..So considering the program runs much faster than the speed of the software running speed in the realization of the function, the program need to set the appropriate time intervals in order to achieve speed and the running speed matching software.

Automatic text messaging in software programming by C++. "serial debugging assistant" after preliminary control implemented, then programming input number users need to send SMS, is arranged at the launch of the program design of specific framework. Users just need input the phone number

of the users in the corresponding position .In addition, send the content is not fixed, users can according to their own needs where the message content input you want to send the contents of the can. At the same time, the user can open according to their own need to multiple users send text messages.

Designing of SMS alarm module for illegal programs

Design ideas

In the completed platform of IPTV. When mobile TV regulation of automatic text messaging software, C language will be called and implementation for the purpose of illegal programs alarm. Specific implementation is: when the MD5 value calculation are not equal, the regulatory platform called automatic text messaging software developed by C language and in the form of text messages on the visual and auditory to carry out illegal operation users give the alarm to reminding.

In Java program implemented regulatory platform program by use of C++ automatic text messaging software, and implementation for the purpose of illegal programs alarm .The realization of the function of the concrete block diagram for:
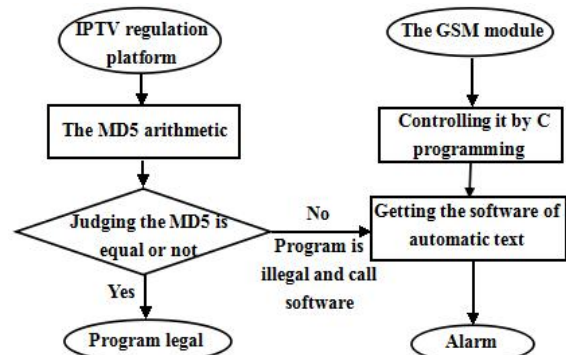

Figure 2 Detecting illegal programs and SMS alarm

The process of the realization of the SMS alarm for illegal program

Firstly, as shown in figure to GSM/GPRS module connect with a computer, and open the text button control, you can see the yellow light flickering light every 3 seconds or so.

Figure 3 Connect and debug the GSM/GPRS module

Secondly, developed by automatic text messaging software: open the "serial debugging assistant" to control "Serial debugging assistant" related button to realize automatic sending text messages to 14787834120 of the mobile users.

"Serial debugging assistant" interface shows "OK" said text

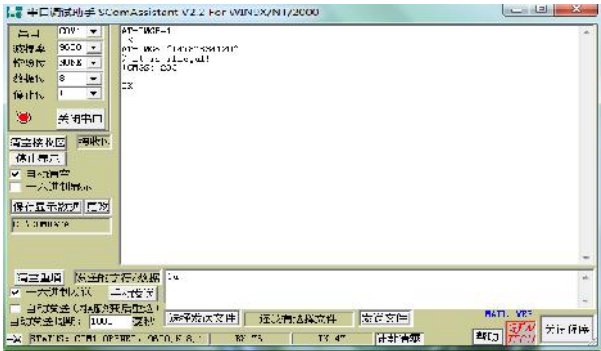messaging success show like [4].On the desktop interface as shown in the figure below.

Figure 4 Control the process of text

Thirdly, program illegal automatic trigger software implementation regulation: Implementation of "serial debugging assistant" after preliminary control, programming input number users need to send SMS, which arranged at the launch of the program design of concrete frame, the user just need input the phone number of the corresponding position.

In addition, send the contents are not fixed, users can according to their own needs where the message content input you want to send the contents of the can. At the same time, the user can open according to their own need to multiple users send text messages. You can see in figure 5 phone receive text messages with the content of the program to write is entirely consistent (" It is illegal! ").

With illegal programming when the automatic text messaging software, you can by use SMS (" It is illegal! ")
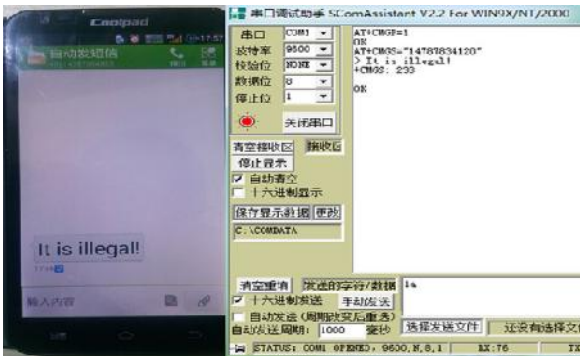

Figure 5 Contrasting send SMS and receive

in the form of users on the auditory and visual alarm at the same time. The following is shown in figure 5.

CONCLUSION

Software of automatic text is developed. On the one hand, it can provide technical support for mobile TV regulation, on the other hand, it can alarm to remind users when they watching illegal programs. The function gives convenient to users and video provider. When mobile phone users execute some illegal operation, the automatic text function is triggered, it can remind users immediately stop the illegal operation by voice and sending text messages. We can do some extends for the function. Such as mobile phone manufacturers can provide some methods of solving the common problems by using the function of automatic text, some problems can be soled by triggering button of automatic text.

Acknowledgements

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