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Mobile-Based Data Traffic Control

التحكم فى حركة البيانات بواسطة الموبايل

A Thesis Submitted in A Partial Fulfillment of the
Requirements for Degree of M.Sc. in
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Abstract

In this Thesis the performance test of select one clinic from eight clinics is evaluated and compared. This test assessment was done using GSM alarm intelligent system tool using the Visual C++ program Language. The test tool designed attempts to mimic, as much as possible, the conditions in actual deployment. The test tool was used to enable GSM alarm system and select one clinic from the outputs. Below are evaluated and test methods:

- Enabled GSM intelligent alarm: This enabled after message send from far terminal, the message contains the password, code of GSM intelligent alarm system and activation number.

- Clinics terminalresponse: this done by software program it open window with the message “SEND MESSAGE”.

- Select wanted clinic: after message received the wanted clinic had been selected and open new window contains the name of the clinic (Opth, Child,Obs,Ent,Card,Surg,Turm and Dent).

Results have shown that the procedure of Simple select the wanted clinic from where you are located within the coverage area.

تجريد

فى هذة الاطروحة لقد تم تقيم و مقارنة اداء إختيار عيادة طبية واحدة من ضمن ثمانى عيادات طبية . تقدير الاختبار تم بواسطة إستخدام نظام إنذار النظام العالمى للإتصالات المتنقلة الذكى و البرمجة بلغى سى بلص بلص . إن اداة الاختبار التى صممت هى محاولات محاكاة قدر الإمكان مع اخذ الشروط فى النشر الفعلى ، اداة الإختبار استخدمت لتفعيل إنذار النظام العالمى للإتصالات المتنقله الذكى و من ثم إختيار عيادة طبية واحدة من ضمن ثمانى عيادات طبية .

فيما يلى طرق الإختبار و التقيم :

-تفعيل إنذار النظام العالمى للإتصالات المتنقله الذكى: يتم التفعيل بعد إرسال رسالة من الطرف البعيد ، الرسالة تحتوى على كلمة السر، رمز إنذار النظام العالمى للإتصالات المتنقله الذكى بالإضافة الى رقم التفعيل .

-إستجابة العيادات الطبية الطرفية: تقوم جميع العيادات الطرفية بالإستجابة للرسالة المرسلة عبر برنامج البرمجة ، حيث يقوم بفتح نافذة تحتوى على رسالة "ارسل رسالة" .

-إختيار العيادة المطلوبة: بعد إستقبال الرسالة يتم إختيار العيادة الطبية المطلوبة و يتم فتح نافذة جديدة تحتوى على إسم العيادة الطبية(عيون، أطفال، نساء و ولادة، انف و اذن، قلب، جراحة، اورام خبثة و اسنان). النتائج أظهرت كيفية الإجراء المبسط لتحديد العيادة الطبية المطلوبة من حيث تتواجد داخل منطقة التغطية .

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Glossary

2G	2nd Generation Wireless Telephone Technology
3G	3rd Generation of Mobile Telecommunications Technology
3GPP	3rd Generation Partnership Project
AMPS	American Mobile Phone System
ASCII	American Standard Code for Information Interchange
AuC	Authentication Center
BSC	Base Station Controller
BSS	Base Station Subsystem
BTS	Base Transceiver Station
CDM	Code-Division Multiplexing
CPU	Central Processing Unit
DCS	Digital Cellular System
DEMUX	De multiplexer
DSL	Digital Subscriber Lines
DSSS	Direct-Sequence Spread Spectrum
DTMF	Dual-Tone Multi-Frequency
EDGE	Enhanced Data Rates for GSM Evolution
EIR	Equipment Identity Register
ETSI	European Telecommunications Standards Institute
FDM	Frequency-Division Multiplexing
FHSS	Frequency-Hopping Spread Spectrum
GMSC	Gateway Mobile Services Switching Center
GPRS	General Packet Radio Service
GPS	Global Positioning System
GSM	Global System for Mobile Communications
GUI	Graphical User Interface
HLR	Home Location Register
HSDPA	High-Speed Downlink Packet Access
HSUPA	High-Speed Uplink Packet Access
IEEE	Institute of Electrical and Electronics Engineers
IP	Internet Protocol
ISDN	Integrated Services Digital Network
LAN	Local Area Network

MIMO	Multiple-Input and Multiple-Output
MISO	Multiple-Input and Single-Output
MS	Mobile Station
MSC	Mobile services Switching Center
MUX	Multiplexer
NADC	North American Digital Cellular
NMT	Nordic Mobile Telephony
NSS	Network and Switching Subsystem
OOP	Object-Oriented Programming
OSI	Open Systems Interconnection
OSS	Operation and Support Subsystem
PCS	Personal Communications Systems
PDH	Plesiochronous Digital Hierarchy
PLMN	Public Land Mobile Network
PSTN	Public Switched Telephone Network
SDH	Synchronous Digital Hierarchy
SDM	Space-Division Multiplexing
SIM	Subscriber Identity Module
SIMO	Single-Input and Multiple-Output
SMS	Short Message Service
STM	Synchronous Transport Modules
TACS	Total Access Communication System
TCP	Transmission Control Protocol
TDM	Time-Division Multiplexing
UMTS	Universal Mobile Telecommunications System
VLR	Visitor Location Register
WCDMA	Wideband Code Division Multiple Access
WLAN	Wireless Local Area Network