ABSTRACT

Quality is the degree of conformance of the product to the applicable specification, guidelines, and workmanship criteria. Quality control and quality engineering are involved in developing systems to ensure products or services designed and produced to meet or exceed customer requirements. These systems are often developed in conjunction with other business and engineering disciplines using a cross-functional approach.

Quality and reliability are two of several important attributes required to satisfy the expectations of a customer. Reliability is the extent to which a product performs its intended function over its intended life under the life-cycle loads encountered.

Quality conformance and qualification activities address the quality and reliability of product. Quality conformance includes all process control and quality assurance activities. The specific activities are qualification testing to ensure reliability and product and materials evaluation testing for quality assurance. The qualification and quality conformance are used in varying contexts in the industry.

The objectives of this research is analyzing the measure of High Definition Television (HDTV displays) devices parameters data by design a user interface screen developed using turbo C++ language in which a comparison of the standard and the result of the device under the test. The standard which is used as reference data is International Electrotechnical Committee (IEC) these commission is professional in all electrical and electronic equipment.

The research describes the procedure used in the IEC standards to determine the quality of HDTV picture and the methods of calculating the result. The program allow the operator to feed the measured values manually then calculate and make decision whether the device is complying with the requirement or not and print out the result.

تجريد

الجودة يمكن أن تعني درجة عالية من الإمتياز "منتج ممتاز" درجة ممتازة. مراقبة الجودة والجودة الهندسية تشتركان في تطوير الأنظمة لضمان المنتجات أو الخدمات وتصمّمان لتلبية متطلبات العميل. هذه الأنظمة تتطور في أغلب الأحيان بالإرتباط مع العمل الآخر وهندسة المجالات.

الجودة والموثقية إثنان من عدة خواص المنتج المهمة التي تتطلبت لإرضاء العميل. الجودة درجة توافق المنتج إلى المواصفات القابلة للتطبيق، تعليمات، ومعايير صناعة. الموثقية هي صلاحية المنتج التي تؤدي وظيفتها المقصودة تحت أحمال دورة الحياة.

يخاطب مطابقة الجودة وعمليات تأهيل الجودة وموثقية المنتج. يتضمن مطابقة الجودة كل سيطرة العملية وعمليات توكيد الجودة. إن العمليات المعنية مؤهل يختبر لضمان موثقية المنتج وإختبار تقييم المواد لتوكيد الجودة. إن التأهيل ومطابقة الجودة مستعمل في تغيير مكونات الصناعة.

إن الهدف من هذا البحث هو تحليل بيانات إختبار التلفزيون ومقارنة هذه البيانات مع مواصفات ال IEC وذلك باستخدام لغة البرمجة Turbo C++ .

أيضا يصف البحث مواصفات ال IEC لاستخراج تقرير عن جودة الصورة بالنسبة للتلفزيون وطرق حساب النتيجة، يسمح البرنامج للمستخدم تغذية البيانات يدويا وتحسب النتيجة لإتخاذ القرار بالنسبة للمنتج وتطبع النتيجة النهائية

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LIST OF ABBREVITION

ABR	Available bit rate service
ACK	Acknowledgment
ATM	Asynchronous Transfer Mode
BS	Base Station or Base Station Controller
VC	Virtual Circuits
CDMA	Code Division Multiplexer Access
DBS	Direct Broadcast Satellite
DC	Direct Current
EPP	Enhanced Parallel Port
HDTV	High Definition Television
ID	Index of Dispersion
IDE	Integrated Development Environment
IEC	International Electrotechnical Commission
IETF	Internet Engineering Task Force
IP	Internet Protocol
IPv_6	Internet Protocol Version 6
IR	Infrared
ISN	Integrated Services Network
ISO	International Organization for Standardization
LED	Light Emission Diode
LAN	Local Area Network
MAC	Media Access Control
MH	Mobile Host
PC	Personal Computer
PRMA	Packet Reservation Multiple Access
QC	Quality Control
QM	Quality Management
RED	Random Early Detection
RM	Resource Management Routing Module
RSVP	Resource Reservation Protocol
RTP	Real Time Protocol
RTT	Round Trip Time
SIR	Signal To Interference Ratio
TC	Turbo C^{++}
TQM	Total Quality Management

LIST OF SYMBOLS

$\bar{X}h$	Mean horizontal distance
$\bar{X}v$	Mean vertical distance
DH_i	Horizontal non-linearity
DVj	Vertical non-linearity
Th	Horizontal trapezium distortion
Tv	Vertical trapezium distortion
α	Parallelogram distribution
Ti	Top contour
Bi	Bottom contour
Li	Left contour
Ri	Right contour
L'	Left inner distortion
$R'1$	Right inner distortion
V_T	Visible top height
V_B	Visible bottom height
V_L	Visible left width
V_R	Visible right width
V_H	Total visible height
V_W	Total visible width
A_L	Active left width
A_R	Active right width
A_H	Total active height
A_W	Total active width