Search report

Reference number: Lowtech Display

Note

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Version 1

Cathode ray tube

The first computer monitors used cathode ray tubes (CRTs). Prior to the advent of home computers in the late 1970s, it was common for a video display terminal (VDT) using a CRT to be physically integrated with a keyboard and other components of the system in a single large chassis. The display was monochrome and far less sharp and detailed than on a modern flat-panel monitor, necessitating the use of relatively large text and severely limiting the amount of information that could be displayed at one time. High-resolution CRT displays were developed for the specialized military, industrial and scientific applications but they were far too costly for general use. Some of the earliest home computers (such as the TRS-80 and Commodore PET) were limited to monochrome CRT displays, but color display capability was already a standard feature of the pioneering Apple II, introduced in 1977, and the specialty of the more graphically sophisticated Atari 800, introduced in 1979. Either computer could be connected to the antenna terminals of an ordinary color TV set or used with a purpose-made CRT color monitor for optimum resolution and color quality. Lagging several years behind, in 1981 IBM introduced the Color Graphics Adapter, which could display four colors with a resolution of 320 x 200 pixels, or it could produce 640 x 200 pixels with two colors. In 1984 IBM introduced the Enhanced Graphics Adapter which was capable of producing 16 colors and had a resolution of 640 x 350.[2] By the end of the 1980s color CRT monitors that could clearly display 1024 x 768 pixels were widely available and increasingly affordable. During the following decade, maximum display resolutions gradually increased and prices continued to fall. CRT technology remained dominant in the PC monitor market into the new millennium partly because it was cheaper to produce and offered to view angles close to 180 degrees.[3] CRTs still offer some image quality advantages[clarification needed] over LCDs but improvements to the latter have made them much less obvious. The dynamic range of early LCD panels was very poor, and although text and other motionless graphics were sharper than on a CRT, an LCD characteristic known as pixel lag caused moving graphics to appear noticeably smeared and blurry.

Version 2

Cathode ray tube

The first computer monitors used cathode ray tubes (CRTs). Prior to the advent of home computers in the late 1970s, it was common for a video display terminal (VDT) using a CRT to be physically integrated with a keyboard and other components of the system in a single large chassis. The display was monochrome and far less sharp and detailed than on a modern flat-panel monitor, necessitating the use of relatively large text and severely limiting the amount of information that could be displayed at one time. High-resolution CRT displays were developed for the specialized military, industrial and scientific applications but they were far too costly for general use. Some of the earliest home computers (such as the TRS-80 and Commodore PET) were limited to monochrome CRT displays, but color display capability was already a standard feature of the pioneering Apple II, introduced in 1977, and the specialty of the more graphically sophisticated Atari 800, introduced in 1979. Either computer could be connected to the antenna terminals of an ordinary color TV set or used with a purpose-made CRT color monitor for optimum resolution and color quality. Lagging several years behind, in 1981 IBM introduced the Color Graphics Adapter, which could display four colors with a resolution of 320 x 200 pixels, or it could produce 640 x 200 pixels with two colors. In 1984 IBM introduced the Enhanced Graphics Adapter which was capable of producing 16 colors and had a resolution of 640 x 350.[2] By the end of the 1980s color CRT monitors that could clearly display 1024 x 768 pixels were widely available and increasingly affordable. During the following decade, maximum display resolutions gradually increased and prices continued to fall. CRT technology remained dominant in the PC monitor market into the new millennium partly because it was cheaper to produce and offered to view angles close to 180 degrees.[3] CRTs still offer some image quality advantages[clarification needed] over LCDs but improvements to the latter have made them much less obvious. The dynamic range of early LCD panels was very poor, and although text and other motionless graphics were sharper than on a CRT, an LCD characteristic known as pixel lag caused moving graphics to appear noticeably smeared and blurry.

Summary

Patent number	Priority date	Ranking
US2014232994 A1	2011-10-31	Similar
US5038301 A	1987-07-31	Similar
US4775857 A	1985-05-17	Related
WO2005093566 A1	2004-03-22	Related
CA1308205 C	1988-08-01	Related
US4709262 A	1985-04-12	Background
US5532763 A	1990-12-27	Background

US2014232994 A1

Similar

Low power laser crt and projection system based on parallel flow electron gun

Abstract: The present invention relates to electronic technology field, and more particularly to CRT and projection system. A low power laser CRT based on parallel flow electron gun comprises a vacuum tube, a laser panel provided at one end of the vacuum tube and an electron gun provided at the opposing end. The electron gun adopts a parallel flow electron gun, wherein the parallel flow electron gun comprises a negative electrode, a G1 electrode and a control electrode, wherein the control electrode is connected to an electron beam current control system. The electron gun of the present invention adopts parallel flow electron gun to emit electron beam, so that the laser panel has even current density distribution

Passage: "...system, comprising an light source system, an optical prism group and a projection optical system, wherein the light source system comprises three laser CRTs as recited in claim 1, wherein the colors of laser light source produced by three laser CRTs are three primary colors respectively and the laser produced by three laser CRTs are formed to one three-color synthesized light beam via the optical prism group. 20. A projection system, comprising a light source system and a projection optical system, wherein the light source system comprises a laser CRT as recited in claim 1, wherein the laser panel of the laser CTR comprises at least two laser cavities which produce one color of three

Claims: 1. A low power laser CRT based on parallel flow electron gun, comprising: a vacuum tube having a first end and an opposing second end, a laser panel provided at the first end of the vacuum tube and an electron gun provided at the second end, characterized in that the electron gun adopts a parallel flow electron gun, wherein the parallel flow electron gun comprises a negative electrode, a G1 electrode and a control electrode, wherein the control electrode is connected to a electron beam current control system. 2. The low power laser CRT based on parallel flow electron gun, as recited in claim 1, wherein the negative electrode and the laser panel are applied with positive voltage respectively,

Publication date: 2012-07-11

Priority date: 2011-10-31

Inventor: XIA ZHONGPING ZHAO JIAN YAN YUAN ZHANG XUEYUAN ZHONG

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CPC class: H01J29/481 G03B21/2033 H01J29/48 H01J31/10

IPC class: H01J29/48 G03B21/20

Legal status: Dead

Link: Espacenet

US5038301 A

Similar

Method and apparatus for multi-monitor adaptation circuit

Abstract: A method and apparatus for controlling two or more video display devices using a single display controller, where the display devices generally require different control data. Basic display control parameters are stored in a memory and, when the controller is to be switched from one display to another, the parameters are read from the memory into a substitution device. The substitution device receives modification control signals which depend on the newly selected display device and modifies the display control parameters before re-programming the display controller. The display controller then contains the parameters as appropriately modified for the currently controlled display device.

Passage: "...vertical scan rates in the 640.times.350 resolution mode of the enhanced color display and the dual scan monitor are not the same. As a result, a single display controller cannot drive both an enhanced color display and a dual scan monitor in the 640.times.350 resolution mode at the same time. SUMMARY OF THE INVENTION The present invention enables a computer and a single display device, or CRT, controller to drive and control two or more display devices, each of which requires different control parameters. The control parameters for the CRT controller are typically provided from the computer according to software instructions. One embodiment of the present invention utilizes

Claims: What is claimed is: 1. 1. A method for controlling two or more video display devices using a single controller, comprising the steps of: transferring display control data to a memory device and to a substitution device; generating type signals indicative of the types of display devices to be controlled; generating first modification signals as determined by the type of a first display to be controlled; modifying the display control data inn the substitution device in response to the first modification signals; programming the controller using the display control data as modified in response to the first modification signals; generating a switch signal to change control from the

Publication date: 1989-02-15

Priority date: 1987-07-31

Inventor: THOMA, III; ROY E.

Applicant: COMPAQ COMPUTER CORPORATION

CPC class: G06F3/1431 G09G2360/02

IPC class: G09G5/00 G06F3/14 G09G1/16

Legal status: Alive

Link: Espacenet

US4775857 A

Related

On-line verification of video display generator

Abstract: On-line verification apparatus of a display generation system comprises a memory which has a display portion and an inactive display portion, the display portion storing display information, and the inactive display portion storing test data. Scan logic controls a monitor, the scan logic accessing the memory at a predetermined location corresponding to the position control signals. A generator generates display control information to provide information control signals to the scan beam thereby providing the visual display corresponding to the display information stored in the display portion of the memory. A register stores display control information generated from the test data stored in the

Passage: "...I claim: 1. 1. In a video display generator having means for producing color address signals for a RAM color look up memory storing color control signals in addressable storage locations, the color control signals stored in an addressable location of the color look up memory determining the color and intensity of each pixel of a raster scan color CRT scanned by electron beams of the CRT, the pixels of the CRT being arranged in horizontal lines and vertical columns, the line and column number of each pixel constituting each pixel constituting each pixels address; a RAM display memory having addressable memory locations for storing binary data; clock means for producing clock

Claims: I claim: 1. 1. In a video display generator having means for producing color address signals for a RAM color look up memory storing color control signals in addressable storage locations, the color control signals stored in an addressable location of the color look up memory determining the color and intensity of each pixel of a raster scan color CRT scanned by electron beams of the CRT, the pixels of the CRT being arranged in horizontal lines and vertical columns, the line and column number of each pixel constituting each pixel constituting each pixels address; a RAM display memory having addressable memory locations for storing binary data; clock means for producing clock signals,

Publication date: 1988-10-04

Priority date: 1985-05-17

Inventor: STAGGS; KEVIN P.

Applicant: HONEYWELL INC.

CPC class: G09G3/006

IPC class: G09G3/00

Legal status: Dead

Link: Espacenet

CA1308205 C

Related

Method and apparatus for multimonitor adaptation circuit

Abstract: METHOD AND APPARATUS FOR MULTI-MONITOR ADAPTATION CIRCUIT A method and apparatus for controlling two or more video display devices using a single display controller, where the display devices generally require different control data. Basic display control parameters are stored in a memory and, when the controller is to be switched from one display device to another, the parameters are read from the memory into a substitution device. The substitution device receives modification control signals which depend on the newly selected display device and modifies the display control parameters before reprogramming the display controller. The display controller then contains the parameters as appropriately

Passage: "...and vertical scan rates in the 640 X 350 resolution mode of the enhanced color display and the dual scan monitor are not the same. As a result, a single display controller cannot drive both an enhanced color display and a dual scan monitor in the 640 X 350 resolution mode at the same time. The present invention enables a computer and a single display device, or CRT, controller to drive and control two or more display devices, each of which requires different control parameters. The control parameters for the CRT controller are typically provided from the computer according to software instructions One embodiment of the present invention utilizes a memory device in conjunction with the

Claims: 1. A method for controlling two or more video display devices using a single controller, comprising the steps of: transferring display control data to a memory device and to a substitution device; generating type signals indicative of the types of display devices to he controlled; generating first modification signals as determined by the type of a first display to be controlled; modifying the display control data in the substitution device in response to the first modification signals; programming the controller using the display control data as modified in response to the first modification signals; generating a switch signal to change control from the first display device to a second display

Publication date: 1992-09-29

Priority date: 1988-08-01

Inventor: THOMA, ROY E., III

Applicant: COMPAQ COMPUTER CORPORATION

IPC class: G06F3/12

Legal status: Dead

Link: Espacenet

WO2005093566 A1

Related

Human interface translator for machines

Abstract: Apparatus and method of providing, from a video output signal of a machine which supplies video output screens displaying in defined fields text and/or graphics in a first language, corresponding video output screens displaying corresponding text and/or graphics in a selected second language. The video output signal is captured; each screen in the video output signal is identified; each textual fields is identified; for each textual field, the contents are identified; and video output screens are generated corresponding to each of the identified screens, each video output screen having substituted therein corresponding text in the selected second language in place of the original text in the

Passage: "...be displayed by the video CRT or LCD monitor. The raster or bit map image on the monitor basically consists of a rectangular grid of"dots", either monochrome or colored, at various intensities. These dots are known in the computer industry as picture elements, or pixels. The resolution of a monitor reflects the number of pixels in the horizontal and vertical directions, stated as (H x V). There are a number of current and dated video interface standards. Examples of such interfaces include the old IBM monochrome and the IBM CGA, the more recent VGA, SVGA, XVGA and WXVGA. Fundamentally, all of these interfaces share the same underlying operating principle, varying

Claims: CLAIMS 1. A method of providing, from a video output signal of a machine which supplies video output screens displaying in one or more defined fields text in a first language, corresponding video output screens displaying in like fields corresponding text in a selected second language, comprising: a. detecting in a screen, of said video output signal, a textual field thereof ; b. for said textual field thereof, identifying textual contents of said field ; and c. generating a video output screen corresponding to the detected screen of the video output signal, said video output screen having substituted therein corresponding text in the selected second language in place of the text in the first

Publication date: 2005-10-06

Priority date: 2004-03-22

Inventor: YOUNIS, SAED

Applicant: ALBAHITH CO. YOUNIS, SAED

CPC class: G06K9/325

IPC class: G06F9/44 G06F17/28 G06K9/32

Legal status: Dead

Link: Espacenet

US5532763 A

Background

Single panel color projection video display

Abstract: A color projection video system utilizing only a single light valve. A white light source is separated into into red, green and blue bands. Scanning optics cause the RGB bands to be sequentially scanned across a light valve, such as a transmission LCD panel. Prior to each color passing over a given row of panels on the light valve, that row will be addressed, by the display electronics with the appropriate color content of that portion of the image which is being displayed. The image is projected by a projection lens onto a viewing surface, such as a screen. The sequence of light bands occurs so quickly as to give the viewer an appearance of simultaneous full color.

Passage: "...BACKGROUND OF THE INVENTION This invention relates to color video projection systems and particularly to a single light valve panel color projection display. Projection television (PTV) and video color display systems, especially rear projection display systems, are a popular way to produce large screen displays, i.e. picture diagonal of 40 inches or greater, as the projection method provides displays which are lighter, cheaper, and in many cases, superior in brightness and contrast, than non-projection based displays. Direct view cathode ray tube (CRT) based systems still dominate non-projection display technology, especially for, 9 inch to 30 inch color displays. In unit

Claims: What is claimed is: 1. 1. A color display system comprising: (a) a light valve having an array of rows of addressable pixels for modulating light impinging on the light valve in accordance with display signals applied to the pixels; (b) means for providing at least two light beams, each beam having a different color, and each beam being wider in the direction of the width of the pixel rows to be addressed and narrower in the direction of the height of the pixel rows to be addressed; (c) means for repeatedly sweeping the beams sequentially across a surface of the light valve in the height direction in a manner that each of the at least two different color beams illuminates only a portion

Publication date: 1992-07-01

Priority date: 1990-12-27

Inventor: JANSSEN; PETER J. BRADLEY; RALPH H. BINGHAM; JOSEPH

Applicant: NORTH AMERICAN PHILIPS CORPORATION

CPC class: H04N9/3117 G02F2001/133622 G09G3/34 G09G3/3607 G09G2310/0235 G09G2310/0297

IPC class: G03B21/00 G02F1/13357 G09G3/34 G09G3/36 H04N9/31

Legal status: Dead

Link: Espacenet

US4709262 A

Background

Color monitor with improved color accuracy and current sensor

Abstract: A color monitor having a highly accurate video processing circuit for providing a high accuracy color CRT display is disclosed which utilizes three feedback loops in each of the three primary color channels, each feedback loop including both the final video amplifier and the CRT in order to achieve equalization and stabilization of their combined signal-to-brightness transfer characteristics against both CRT and circuit drift. The video processor circuitry also includes a D/A converter for generating a signal representative of the desired amplitude component for each primary color from a three bit digital input. By utilizing the three feedback loops, the color produced in the CRT display is independent

Passage: "...the representative signal and applying it to the cathode of said CRT. 9. 9. The video processing system of claim 7, wherein said digital-to-analog converter converts a three bit digital color code input to a signal representative of a desired amplitude component for a primary color of said CRT. 10. 10. The color video monitor of claim 6, wherein a plurality of said means for processing an input video signal is utilized. 11. 11. The color video monitor of claim 10, wherein each of said plurality of said means for processing an input signal independently processes a different primary color of said CRT. 12. 12. The video processing system of claim 6, wherein said means for

Claims: What is claimed is: 1. 1. A color video monitor having a video siganl path for providing an input video signal and for displaying the video signal on a high resolution CRT display, comprising: means for processing an input video signal, said means for processing associated with the video signal path such that the video signal is not affected by said means for processing; means for producing color convergence signals; first means, connected to receive said color convergence signals, for providing vertical deflection signals and convergence driver signals for said color video monitor; second means, connected to the first means, for providing horizontal deflection signals and dynamic

Publication date: 1987-11-24

Priority date: 1985-04-12

Inventor: SPIETH; ROBERT H. DELORENZO; ANTHONY N.

Applicant: HAZELTINE CORPORATION

CPC class: G09G1/285

IPC class: G09G1/28

Legal status: Alive

Link: Espacenet