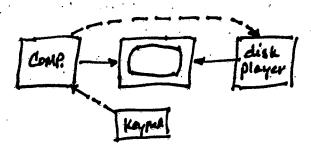
Mark - June 23, 1981 5634-1-1

The Willest system works a competen, an extraol disk player, a TV monitor, an a Keypal:

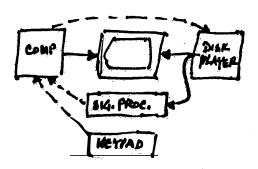


The disk holds 30 minutes of frame addressable linear video programs. Additionally three are many still frames. The computer program that controls the MDs application is on a stoppy disk inserted into a disk drine of the computer. The program includes the addresses of all the segments and still frames on the disk and allows the computer to branch to the relevant segments and stills in response to the MD's menu pelections entered at the keyped. At the end of the tetorial pession, the computer evaluates the MD's decisions and displays a score on the W. Included is the total sound the patient must pay for sector visits, lab fees, medicine, etc.

The Wicht paleswoman who gave the demo paid that the disk player doeslet control the computer in any way and that there is nothing in the linear video that causes the computer to compute or output anything.

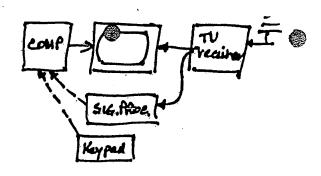
PMC#19

The order of a WICAT like system to be able to present my reordenic model, the linear video must be able to explain what's going on in the computer. Thus the computer program must be in the linear video rather than on the koppy disk. Or more relevantly, some of the program must be in the video and some must be on the koppy. The various digital detector paths in our signal processor can detect the embedded computer programing and input it to the computer. Three alternative consignments accounts me.



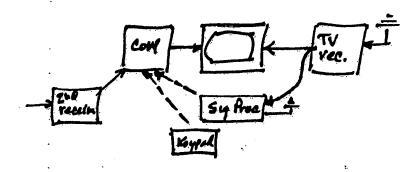
In this first-configuration, the video-that television travallistic that the disk player transfer to the TV monitor is also transferred to the Sig. Proc. where the embedded instructions are detected and a connection from the bolke/emperator to the computer)

In order for the repromie model to have its most useful communcial application, it's essential that the user see the most up-to-sate information, both as data and in the video progressing. This requires a television received be added at a minimum:



The TV vection is shown here as replacing the disk player, but it could also be an added prece of equipment. Obviously the TV transmission is input to the signal processor in such a way that the proper pakes are import to the detectors and the instructions are inputed to the computer.

To get up-to-date pries date, the signal prosessor could continuously receive a second transmission and input it to the computer, or the computer could receive the priess from another sources



In this drawing the signal processor is alterting data in a second transmission and the "2nd receive" is inputting data like a modern.

To work properly, the compute must be programed to hold the viewer recurities portfolio (eg, bonds) and process the pacined priess and programing instructions. The computer stoves velevant priess (e.g. doily closing priess, weekly closes, montacy, closes as well as current priess). It may also have the capacity to guery a data base for unusual information)

A TV program on economic/financial planning is-vectived and # displayed. In the program are embedded instructions. That control Kee computer. The signal processor dettels the instructions and jupots them to the computer. At the beginning of the program the instructions course the computer to computer various projections on the basis of the viewers stored information and construct corresponding graphics that show the projections. The aunounce pays, "The fed raised the discount rate today, and here is tout what for model says is the way the Tield curve will react over the country week. " In the TV program, the image of a specific grade of securities -- 0.9. Stp A - is shown. The auroverses then says, On the basis () our juld spread projections, here is what the model projects your portfolio to do over the same period," At this point a particular instruction is detected that couses the computer to communicate a hist graphie. to the TV and the TV to display it overlaid on the Tield curre projection. " Subsequently stang of the graphies are shown on embedded command.

In an audience of any sizem beyond one, each boul trader would see a different graphic representation because each would have differentbonds with different grades/materities/coopers particular sensitivity and would potentially have significant values for users and an impact on the market

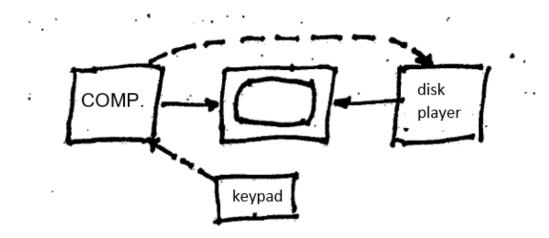
het me know if any of this isn't clear to you and if you know anyone doing this or talking about it. I'll pursue the

question of patentability.

Best regards

Witnessed & Received;

The WICAT system involves a computer, a optical disk player, a TV monitor, and a keypad:



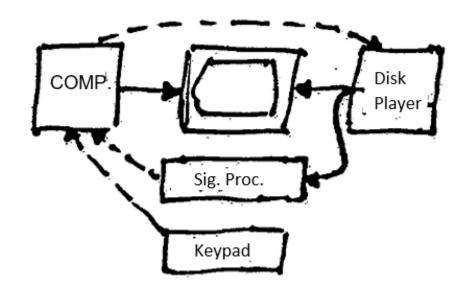
The disk holds 30 minutes of frame addressable linear video segments. Additionally, there are many still frames. The computer program that controls the MDs application is on a floppy disk inserted into a disk drive of the computer. The program includes the addresses of all the segments and still frames on the disk and allows the computer to branch to the relevant segments and stills in response to the MD's menu selections entered at the keypad. At the end of the tutorial session, the computer evaluates the MD's decisions and displays a score on the TV. Included is the total sum the patient must pay for the doctor visits, lab fees, medicines, etc.

The WICAT saleswoman who gave the demo said that the disk player doesn't control the computer in any way and that there is nothing in the linear video that causes the computer to compute or output anything.

PMC #16

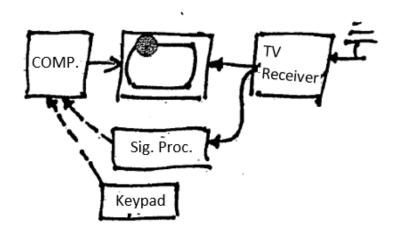
17

In order for a WICAT like system to be able to present my economic model, the linear video must be able to explain what's going on in the computer. Thus, the computer program must be in the linear video rather than on the floppy disk. Or more relevantly, some of the program must be in the video and some must be on the floppy. The various digital detector paths in our signal processor can detect the embedded computer programming and input it to the computer. Three alternative configurations occur to me:



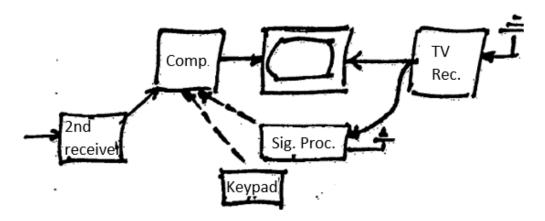
In the first configuration, the television transmission that the disk player transfers to the TV monitor is also transferred to the Sig. Proc. where the embedded instructions are detected and input a connection the computer (the S.P. requires a [illegible text] from the buffer/comparator to the computer.)

In order for the economic model to have its most useful commercial application, it's essential that the user see the most upto-date information, both as data and in the video programming. This requires a television receiver be added at a minimum:



The TV receiver is shown here as replacing the disk player, but it could also be an added piece of equipment. Obviously the TV transmission is input to the signal processor in such a way that the proper paths are input to the detectors and the instructions are inputted to the computer.

To get up-to-date price data, the signal processor could continuously receive a second transmission and input it to the computer, or the computer could receive the prices from another source:



In this drawing the signal processor is detecting data in a second transmission and the "2nd receiver" is inputting data like a modem.

To work properly, the computer must be programmed to hold the viewers securities portfolio (e.g., bonds) and process the received prices and programing instructions. The computer stores relevant prices (e.g. daily closing price, weekly closes, monthly closes as well as current prices). It may also have the capacity to query a data base for unusual information.

A TV program on economic/financial planning is received and displayed. In the program are embedded instructions that control the computer. The signal processor detects the instructions and inputs them to the computer. At the beginning of the program the instructions cause the computer to compute various projections on the basis of the viewers stored information and construct corresponding graphics that show the projections. The announcer says, "The Fed raised the discount rate today, and here is what our model says is the way the yield curve will react over the coming week." In the TV program, the image of a specific grade of securities — e.g. S&PA — is shown. The announcer then says, "On the basis of our yield spread projections, here is what the model projects your portfolio to do over the same period."

At this point a particular instruction is detected that causes the computer to communicate a first graphic to the TV and the TV to display it overlaid on the yield curve projection. Subsequently others of the graphics are shown on embedded command.

In an audience of any size beyond one, each bond trade would see a different graphic representation because each would have different bonds with different grades/maturities/coupons, etc. The program could point out areas of particular sensitivity and would potentially have significant values for users and an impact on the market.

Let me know if any of this isn't clear to you and if you know anyone doing this or talking about it. I'll pursue the question of patentability.

Best Regards

[John Harvey's signature]

Witness & Received,
Mark Grossman
6/25/81