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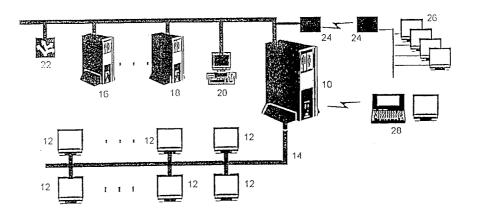
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(54) Title: IMPROVED METHOD AND APPARATUS FOR DISPLAY OF WINDOWING APPLICATION PROGRAMS ON A TERMINAL



(57) Abstract

A video display terminal (12) capable of operating with a graphical user interface. The terminal is not fully compatible with personal computer (20) BIOS or disk operating systems and incapable of executing windowing application locally, adapted to receiving windowing information supplied by programs executing on a remotely located application server (26). The invention provides FOP (24) and SNAP capabilities along with a number of user interface enhancements, DHCP and SNMP enhancements. File information is transferred to and from the terminal using a communications protocol (16). One or more image upgrades are transferred to the terminal from the remotely located application server (26).

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INTERNATIONAL SEARCH REPORT

International application No. PCT/US99/21734

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A. CLASSIFICATION OF SUBJECT MATTER IPC(6) :G06F 13/00, 15/136, 9/44 US CL :345/329, 335; 709/203, 218 According to International Patent Classification (IPC) or to both national classification and IPC								
	DS SEARCHED							
Minimum documentation searched (classification system followed by classification symbols)								
U.S. : 345/329, 331, 333, 335, 348, 356 705/21, 23, 26; 395/200.38, 200.46; 709/203, 218								
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched								
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) remote application server, automatic download, Internet Protocol addres, image files								
C. DOCUMENTS CONSIDERED TO BE RELEVANT								
Category*	Citation of document, with indication, where ap	ppropriate, of the relevant passages	Relevant to claim No					
Y,P	US, 5,909,545 A (FRESE, II et al) 01 June 1999, col. 7, lines 1-50. 1-43							
Y,P	US 5,951,648 A (KAILASH) 14 Septe	1-43						
Y,P	US 5,815,661 A (GOSLING) 29 Sept 56.	1-43						
A,P	US, 5,878,223 A (BECKER et al) 02	1-43						
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