

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DOUGLAS M. BENIGNUS and KANTI C. SHAH

Appeal No. 1999-0246
Application 08/641,629¹

ON BRIEF

Before MARTIN, JERRY SMITH, and RUGGIERO, Administrative Patent Judges.

MARTIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the examiner's final rejection of 1-6, 8, 9, 13, and 14, all of the pending claims, under 35 U.S.C. § 103(a).

We reverse.

¹ Application for patent filed May 2, 1996.

A. The invention

The invention relates to apparatus for and a method of remotely placing a computer in a service mode and then returning it to a normal operational mode.

Referring to appellants' Figure 1, physical key 114, which is located at the site of the computer system, has three possible positions: normal/run, secure, and service. The status of this physical key is stored in register 111 in NVRAM 110, which has another register 112 for storing an electronic key received via port S2 from remote terminal 120. This electronic key likewise has three possible states: normal/run, secure, and service.

The electronic key is effective to remotely place the computer system in the normal operational mode, service mode, or secure mode only when the physical key at the site of computer system is in the normal operational mode (Specification at 4).

When the physical key is in the serve mode or the secure mode, the electronic key is essentially deactivated (id.).

A key interface menu, which allows one to change the electronic key, is presented at under either of the following sets of circumstances:

(1) The physical key is in the normal/run position and the electronic key is in the secure position; or

(2) The physical key and the electronic key are both in the normal/run position and a failure is encountered while executing a built-in self test, power-on self test, or quick confidence test. (Specification at 11.)

All maintenance, either local or remote, is permitted only in the service position of either the physical key or the electronic key (Specification at 17).

B. The claims

Claim 1, which is representative, reads as follows:

1. A data processing system comprising:

a processor,

a memory, wherein the memory includes a physical key memory location for storing a representation of a physical key having three positions corresponding to a normal/run mode, a secure mode, and a service mode and an electronic key memory location for storing a representation of an electronic key having three positions corresponding to said normal/run, secure, and service modes,

a bus for coupling said processor to said memory,

providing means for providing a key interface menu to a remote station when the representation of the physical key and representation of the electronic key indicate that the physical key and the electronic key are in said normal/run mode and a

failure is encountered during self testing of the data processing system or when the representation of the physical key indicates that the physical key is in said normal/run mode and the representation of the electronic key indicates that the electronic key is in said secure mode and for providing a maintenance menu to the remote station when one of said physical key or said electronic key representations indicate that one of said physical key or said electronic key are in said service mode, and

setting means for setting the electronic key into said service mode based on information received from the remote station such that the remote station can control and monitor modes of operation of the data processing system.

C. The references and rejections

The examiner relies on the following U.S. patents:

Smitt et al. (Smitt)	4,685,124	Aug. 04, 1987
Heptig et al. (Heptig)	5,377,269	Dec. 27, 1994

All of the appealed claims stand rejected under § 103(a) for obviousness over Smitt in view of Heptig.

D. Appellant's burden of persuasion on appeal

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Appellants bear the burden of showing that the evidence on which the examiner relies is insufficient to establish a prima facie case of obviousness or that appellants have provided evidence which rebuts the prima facie case of obviousness. See In re Rouffet, 149 F.3d 1350, 1355 47 USPQ2d 1453, 1455 (Fed. Cir. 1998):

To reject claims in an application under section 103, an examiner must show an unrebutted prima facie case of obviousness. See In re Deuel, 51 F.3d 1552, 1557, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995). In the absence of a proper prima facie case of obviousness, an applicant who complies with the other statutory requirements is entitled to a patent. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of prima facie obviousness or by rebutting the prima facie case with evidence of secondary indicia of nonobviousness. See id.

Appellants challenge the sufficiency of the evidence on which the examiner's prima facie case is based.

E. The merits of the rejection

Smitt discloses a computer network 11 which includes a control and switching device 17 for selectively coupling a remote

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terminal 23 at a remote location 27 through modems 19 and 25 and a telephone line 29 to a system console 15, a host computer 13, and a user terminal 20-1 for remote diagnosis of hardware and software problems and which provides different degrees of access of the remote terminal and a variety of operating modes (Fig. 1; col. 1, ll. 6-10). Referring to Figure 2, which shows the details of control and switching device 17, a switch register 95 receives signals from a front panel keyswitch 97 over lines 99

indicating whether the remote terminal is operating in the full access mode, limited access mode, or no access mode (col. 3, ll. 40-49; col. 7, ll. 38-41). The table at column 8 shows which of the available control commands (i.e., A-E, H, J, M, N, S-V, and ?), which are entered by striking the BREAK key before striking the letter key (col. 5, ll. 10-11), can be input via the system console, user terminal, and remote terminal when the keyswitch is in the NONE, LIMITED, and FULL access positions. For example, when the keyswitch is in the FULL position, the remote terminal can be used to input any of commands M, N, and U to select an operating mode. Command M

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("Remote Mode - SYSTEM") gives system console capabilities to the remote terminal operator (col. 9, ll. 44-50). Command U ("Remote Mode - USER") gives user terminal capabilities to the remote terminal operator (col. 10, ll. 11-16). Command N ("Remote Mode - NONE") is used to "un-patch" the remote terminal, i.e., to exit the SYSTEM mode or USER mode (col. 9, ll. 56-65). On the other hand, Command V ("Configuration VIEW/CHANGE"), which is used to view and change the parameters of the various serial ports, can be entered via the remote terminal in the NONE, LIMITED, and FULL positions of the keyswitch (col. 10, ll. 22-23).

In the final Office action (Paper No. 17), which incorporates the preceding Office action (Paper No. 15), the examiner read the claimed "physical key having three positions corresponding to a normal/run mode, a secure mode, and a service mode" (emphasis added) on Smitt's three-position keyswitch 97 and relied on Heptig as teaching the claimed "electronic key having three positions corresponding to a normal/run mode, a secure mode, and a service mode" (emphasis added). However, in the Answer (at 4), the examiner reversed

his position on this matter, relying now on Smitt and Heptig for the electronic key and physical key, respectively.²

Heptig discloses security apparatus including an electronic key 14 and a jack 16 for controlling access to the data and programs in a personal computer. The key 14 contains coding identifying a unique user (col. 5, ll. 33-36). One or more of the keys 14 are encoded as a "system master" or administrator level key, and the remaining keys are encoded as user level keys (col. 5, ll. 38-40). Figures 13a-f are display menus representing the administrative functions that can be performed when a valid administrative key is detected as present in the jack (col. 16, ll. 13-15). Specifically, Figure 13a is the FIRMLoc Main Utility Menu. Figure 13b is the User/Key Utility Menu, which includes Show Users, Add User to System, Delete User from System, and Read Key. Figure 13c is the System Datalog File Utility Menu, which includes Read Access Allowed Log, Read Access Denied Log, Read Boot-Up Log, and Return to

² Appellants did not file a reply brief addressing this change or any of the other changes in the examiner's explanation of the rejection.

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FIRMLOC Main Utility Menu. Figure 13d is an example of a User Access Datalog Window. Figure 13e is an example of a User Access Denied Datalog Window.

Finally, Figure 13f is a FIRMLOC Setup Options Menu, including User Display Options, Hardware IRQ Options, and Return to FIRMLOC Main Utility Menu.

The examiner, after characterizing Heptig as teaching a "physical key" 14 and menus that are presented to a user to perform various administrative functions, argues (Answer at 8-

9): It would have been obvious to one of ordinary skill in the art to modify Smitt to provide a physical key having three modes and menu controls because one of ordinary skill would have wanted some easy to operate mechanism to allow a remote user to change the operational modes of the computer system. Motivation for this modification is provided by the combination as a whole. When viewed as such, one of ordinary skill would have added a remote physical key and administrative menus to Smitt because that would enable Smitt's system to be securely and easily controlled from a remote terminal 23. Motivation for this

modification would have been obvious because the menus of Heptig provide an easier interface than the command line controls found in Smitt on column 8, lines 40-45, 64-68 for example. This has the stated benefit of allowing a remote user control over the setting of all administrative functions and would have allowed one to set the normal, service and secure modes of operation from the remote location.

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Motivation for this modification is further provided by Smitt in that he wants to provide maintenance/diagnosis functions from a remote terminal (see column 3, lines 8-11). With such a desire in mind, one of ordinary skill would have turned to the physical key and menus of Heptig placing it at the remote terminal 23 specifically because the menus of Heptig provide an easier interface than the command line controls found in Smitt on column 8, lines 40-45, 64-68 for example.^[3]

This reasoning is unclear as to why one skilled in the art would have been motivated by Heptig's key, which does not have three-positions and does not select among normal/run, secure, and service operating modes, to add such a key to Smitt's remote terminal. However, in response to appellants' criticism that Heptig's key does not have three positions, the examiner states that this is irrelevant because Smitt's key has three positions (Answer at 7). Thus, the examiner's position regarding the claimed physical key appears to be that it would have been obvious in view of Heptig's key to provide Smitt's remote terminal with a three-position key that performs the same function as Smitt's three-position key 97, reasoning which has not been addressed by appellants. Nevertheless, appellants

³ The underlined passages appeared for the first time in the Answer and thus have not been addressed by appellants.

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have made another argument we find persuasive, which is that the examiner failed to explain why it would have been obvious to provide the key interface menu and maintenance menu under the specific conditions recited in the claim. The rejection of claim 1 is therefore reversed, as are the rejection of its dependent claims 2-6, 9, 13, and 14, as is the rejection of independent claim 8, which is deficient in the same respect as claim 1.

REVERSED

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JOHN C. MARTIN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JERRY SMITH)	
Administrative Patent Judge)	APPEALS AND
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