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International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

| (51) International Patent Classification 4 : G06F 12/14 | A1 | (11) International Publication Number: WO 89/ 04520 |
|---|---|---|
| | | (43) International Publication Date: 18 May 1989 (18.05.89) |

(21) International Application Number: PCT/US88/03923

(22) International Filing Date: 3 November 1988 (03.11.88)

(31) Priority Application Number: 118,909

(32) Priority Date: 10 November 1987 (10.11.87)

(33) Priority Country: US

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(81) Designated States: AT (European patent), AU, BE (European patent), CH (European patent), DE (European patent), DK, FI, FR (European patent), GB (European patent), IT (European patent), JP, KR, LU (European patent), NL (European patent), NO, SE (European patent).

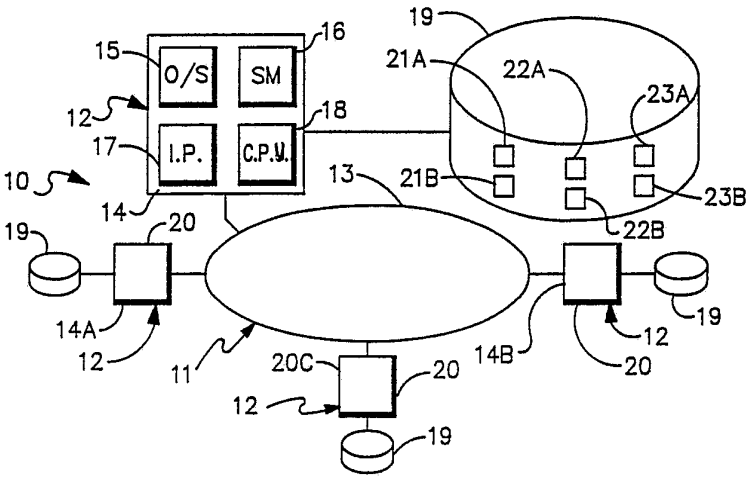
**Published**
*With international search report.*
*With amended claims.*

**Date of publication of the amended claims:**
1 June 1989 (01.06.89)

(54) Title: COMPUTER PROGRAM LICENSE MANAGEMENT SYSTEM

(57) Abstract

A computer program license management system limits the number of copies of computer programs (24A/24B) allowed to run simultaneously on a network (11) based on the number of licenses (27) loaded in license files (22A/22B) in the network (11). If a valid license file (22A/22B) at a local node (14) contains an unexpired, available license (27), a license manager (25A/25B) at the local node (14) allows the computer program (24A/24B) to be executed at the requesting local node (14), and if not, the license manager (25A/25B) searches the other nodes (20) for such a file (22A/22B) and license (27), and if successful, the license manager (25A) transfers such license (27) to the local node (14), assigns and encrypts a unique identification to the transferred license (27) and erases the original record of the transferred license (27) from the license file (22A) at the remote node (20). In a second embodiment, the license manager (25B) only indicates in the license file (22B) the use of the license (27) at the local node (14) without such transfer.



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AMENDED CLAIMS
[received by the International Bureau on 1 May 1989 (01.05.89)
original claims 1-5, 7-19, 22-46, 49, 50 and 52 amended; new claims 53-61
other claims unchanged (32 pages)]

1. A license management system for limiting the number of copies of a given computer program that are permitted to run simultaneously on one or more nodes of a network in which said nodes are connected, said limiting being according to the number of licenses for said given computer program that are authorized for said network; said system comprising:

license file means on at least one of said nodes for storing at least one of said licenses;

program storage means for storing a copy of said given computer program on each of said nodes at which it is desired to run a copy of said given computer program; and

license management means operatively linked to each said copy, said license management means being responsive to a request from said copy to which it is operatively linked for searching said nodes to locate one of said license file means that has a license that is available for authorizing use at a local one of said nodes at which said requesting copy is stored, said search first being made at said local node and if no such license file means having an available license is located at said local node, said search continuing in seriatim among said nodes other than said local node until one such license file means having an available license is located or until all said nodes have been searched without locating one such license file means having an available license;

said license management means being responsive to the search of all of said nodes without locating one such license file means having an available license for returning to said copy at said local node a message preventing said copy from being executed at said local node in response to said request.

2. A license management system according to Claim 1, further comprising:

means for assigning a unique identification to each of said license file means;

said license management means being effective upon location of any one of said license file means to compare the unique identification of said located license file means to the unique identification assigned to said located license file means by said assigning means to determine whether said license file means is valid, said license management means being effective in response to a determination that said located license file means is valid for determining whether said license in said located license file means is being used, said license being not available to authorize use of said copy of said computer program if either said unique identification of said license file means is invalid or if said license is being used.

3. A management system for controlling the operability of computer programs on any of a plurality of workstations coupled together in a network, wherein it is required that a license be available for one of said workstations in order to enable a copy of a given one of said computer programs to run on said one workstation and wherein the number of licenses for said given computer program that is authorized on said network is less than or equal to the number of copies of said given computer program that can run simultaneously on said network, said system comprising:

license file means for storing at least one of said licenses on at least a selected one of said workstations;

system means for assigning to said license file means and storing an identification (UID) that is unique to said license file means; and

means responsive to a request for execution of a copy of said given computer program on said selected workstation for searching said selected workstation to locate said license file means at said selected workstation, said searching means being responsive to locating said license file means for comparing said UID of said license file means to the UID stored by said system means for said license file means and, if said compared UIDs are the same, and if said license in said located license file means is not in use, enabling said copy of said given computer program to run on said selected workstation.

4. A computer that is programmed to perform functions selected to control the operability of computer programs on any of a plurality of workstations coupled together in a network, wherein it is required that a license be available when a request is made to execute a copy of a given one of said computer programs on a particular one of said workstations, and wherein an aggregate number of said licenses authorized for said network is less than the number of copies of said given computer program that can be executed simultaneously on said workstations of said network, said selected functions comprising:

storing a license file on at least one of said workstations, said license file including at least one of said licenses, the aggregate number of said licenses that are stored being less than the number of copies of said given computer program that can be executed simultaneously on said workstations;

assigning to each said stored license file an identification (UID) that is different from the UID of all other ones of said license files;

in response to a request for operation of a copy of said given computer program at a particular one of said workstations, searching said particular workstation to determine whether one of said license files is stored on said particular workstation;

in response to locating said license file on said particular workstation, comparing said UID of said located license file to a system record of the UID for said located license file;

in response to said compared UIDs being the same, determining whether one of said licenses in said located license file is available to authorize execution of a copy of said given computer program at said particular workstation; and

enabling said computer program to be executed on said particular workstation if said license is available.

5. A license management system for controlling the running, at nodes connected in a network, of copies of a given computer program, wherein a license is required for each copy of said given computer program that is to run simultaneously with other copies of said given computer program, and wherein the number of licenses authorized for said network and said given computer program is less than the number of copies of said given computer program that can run simultaneously on said network, wherein a directory is on each of said nodes for indicating which licenses, if any, are on a given node, and wherein a request can be made to run a copy of said given computer program at a first node when no license is available at said first node but is available at a second node, said system comprising:

license file means provided at each said node for containing at least one of said licenses;

system means for assigning a unique identification to each of said license file means on said nodes and for storing a record of each of said unique identifications; and

first management means linked to a copy of said given computer program at said first node for receiving said request and searching said license file means at said second node to determine that said license files means is at said second node;

said first management means being effective in response to said determination for comparing said UID of said license file means at said second node to said record of said UID in said system means to determine that said license file means at said second node is valid, and then to determine that at least one license therein is not in use;

said first management means being effective upon making both said determinations for returning a status to said copy of said given computer program at said first node indicating that said copy of said given computer program is authorized to run.

6. A management system for controlling the operability of copies of a given computer program on any of a plurality of workstations coupled together in a network, wherein more than one copy of said given computer program can be permitted to run simultaneously on a given one of said workstations, and wherein it is required that a license be available for each copy of said given computer program that is to run, and wherein an aggregate number of licenses for said given computer program that are available for said network is less than an aggregate number of copies of said given computer program that can run simultaneously on the workstations of said network; said management system comprising:

license file means stored on a selected one of said workstations at which it is desired to operate more than one copy of said given computer program, said license file means including at least two of said licenses;

system means for assigning to said license file means and storing therefor a unique identification;

means responsive to a request to run at least two of said computer programs on said selected workstation for searching said selected workstation to locate said license file means; and

means responsive to said searching means locating said license file means on said selected workstation for comparing said identification of said located stored license file means to the identification stored by said system means for said respective license file means, and if said respective compared identifications are the same and two of the licenses in said license file means are not in use, enabling both of said corresponding copies of said given computer program to run on said selected workstation.

7. A method of controlling the operability of copies of a computer program on any of a plurality of workstations coupled together in a network, wherein it is required that a license be available for each copy of said computer program that is to be executed, and wherein the number of licenses for said computer program that are authorized for said network is limited, said method including the steps of:

storing at least one of said licenses in a license file on at least a selected one of said workstations;

assigning to each stored license file an identification (UID) that is different from the UID of all other ones of said license files;

searching said selected workstation in response to a request for execution of a copy of said computer program at said selected workstation to determine whether one of said license files is on said selected workstation;

upon locating said license file on said selected workstation, comparing said UID of said located stored license file to a record of said assigned UID for said located license file; and

if said compared UIDs are the same, and if said license in said license file is inactive, then enabling said copy of said computer program to be executed at said selected workstation.

8. A method of managing licenses to limit the number (S) of copies of a given computer program that may be executed simultaneously on the nodes of a network to less than or equal to the number (L) of licenses that are authorized for said network and said given computer program, each of said nodes having a system memory, license memory means for storing up to L ones of said licenses and a directory for identifying said licenses stored in said license memory means, said method comprising the steps of:

loading a copy of said given computer program onto each of said nodes on which it is desired to execute a copy of said given computer program, each said copy of said given computer program being current with respect to time when its term of authorized use has not expired;

loading an aggregate of L licenses into said license memory means on said nodes of said network such that a maximum of L copies of said given computer program can be executed simultaneously on said network;

assigning to each said license memory means an identification that is unique to said license memory means at each said node at the time of such loading;

in response to a request for the execution of a copy of said given computer program at a first of said nodes, searching said directory at said first node for license memory means thereon, and upon determining that no license memory means is at said first node or that all licenses in said license memory means located at said first node are active or that the unique identification of said license memory means located at said first node is invalid, then sequentially searching said directories at other ones of said nodes for said license memory means; and

upon locating license memory means that is at another node and that has a valid unique identification and that has an inactive, current license therein, returning a run message to said copy of said given program at said first node to enable said copy of said computer program to be executed on said first node.

9. A license management system for limiting the number of copies of a given computer program that are permitted to run simultaneously on one or more nodes of a network in which said nodes are connected, said limiting being according to the number of licenses for said given computer program that are authorized for said network, said licenses being loaded onto one or more of said nodes; said system comprising:

means for storing a copy of said given computer program on each of said nodes at which it is desired to run a copy of said given computer program; and

license management means operatively linked to each said copy, said license management means being responsive to a request from said copy to which it is operatively linked for searching said nodes to locate one of said licenses that is available for use at a local one of said nodes at which said requesting copy is stored, said search first being made at said local node and if no available license is located at said local node, said search continuing in seriatim among said nodes other than said local node until an available license is located or until all said nodes have been searched without locating an available license; said license management means being responsive to the search of all said nodes without locating an available license for returning to said copy at said local node a message preventing said copy from being run at said local node in response to said request.

10. A management system for controlling the operability of computer programs on any of a plurality of workstations coupled together in a network, wherein it is required that a license be available at one said workstation in order to enable a copy of one of said computer programs to run on said one workstation and wherein the number of licenses for a given computer program that are authorized to run on said network is less than the number of copies of said given computer program that can run simultaneously on said network, said system comprising:

means for storing one of said licenses on at least a selected one of said workstations, the number of said workstations on which said licenses are stored being less than the number of copies of said given computer program that can run simultaneously on said workstations;

system means for assigning to each said stored license and storing an identification (UID) that is different from the UID of all other ones of said licenses;

means responsive to a request to run a copy of said given computer program on said selected workstation for searching said selected workstation to determine whether one of said licenses is available to authorize a copy of said given computer program to run on said selected workstation; and

means responsive to locating said available license for comparing said UID of said located available license to the UID stored by said system means for said located available license and, if said compared UIDs are the same, enabling said copy of said computer program to run at said selected workstation.

11. A computer that is programmed to perform functions selected to control the operability of computer programs on any of a plurality of workstations coupled together in a network, wherein it is required that a license be available at one said workstation in order to enable a copy of a given one of said computer programs to run on said one workstation, and wherein the number of said licenses authorized for said network is less than the number of copies of said given computer program that can run simultaneously on said network, said selected functions comprising:

storing one of said licenses on at least a selected one of said workstations, the number of said workstations on which one of said licenses is stored being less than the number of copies of said given computer program than can run simultaneously on said workstations;

assigning to each said stored license an identification (UID) that is different from the UID of all other ones of said stored licenses;

in response to a request for operation of a copy of said given computer program at said selected workstation, searching said selected workstation to determine whether one of said licenses is stored and available on said selected workstation;

in response to locating said available license stored on said selected workstation, comparing said UID of said located stored license to a system record of the UID for said located stored license; and

in response to said compared UIDs being the same, enabling said copy of said given computer program to run on said selected workstation.

12. A license management system for controlling the availability for operation, at nodes connected in a network, of copies of a given computer program on said nodes, wherein a license is required on each said node at which a copy of said given computer program is to run, and wherein the number of licenses authorized for said network and said given computer program is less than or equal to the number of copies of said given computer program that can run simultaneously on said network, wherein a license file is provided at each said node for indicating that one of said licenses is on said node, wherein a directory is on each of said nodes for indicating which licenses, if any, are on a given node, and wherein a request can be made to run a copy of said given computer program at a first node when no license is available at said first node but is available at a second node, said network including system means for assigning a unique identification to each license on said nodes, said system means being effective to store a record of said unique identifications; said system comprising:

first management means linked to said copy of said given computer program at said first node for receiving said request and searching said license file at said second node to determine that said license is available on said second node;

said first management means being effective in response to said determination for transferring said available license from said second node to said first node if said available license is valid at said second node and has not expired; and

said first management means being effective for requesting said system means to assign a unique identification to said available license transferred to said first node.

13. A management system for controlling the operability of copies of a given computer program on any of a plurality of workstations coupled together in a network, wherein more than one copy of said given computer program can be permitted to run simultaneously on a given one of said workstations, and wherein it is required that a license be available for each copy of said given computer program that is to run, and wherein the aggregate number of licenses for said given computer program that are available for said network is less than the aggregate number of copies of said given computer program that can run simultaneously on the workstations of said network; said management system comprising:

means for storing at least two of said licenses on a selected one of said workstations at which it is desired to operate more than one copy of said given computer program;

system means for assigning to each said stored license and storing therefor an identification that is different from the identification of all other ones of said licenses stored on said network;

means responsive to a request to run at least two copies of said given computer program on said selected workstation for searching said selected workstation to determine whether one or more of said licenses is available on said selected workstation; and

means responsive to said searching means locating at least one of said licenses on said selected workstation for comparing said identification of each said respective located stored license to the identification stored by said system means for said respective located stored license, and if said respective compared identifications are the same and the corresponding license is available on said selected workstation, enabling an amount of said copies of said given computer program to run on said selected workstation equal to the number of available compared licenses located on said selected workstation.

14. A license management system for limiting the number (S) of copies of a given computer program that may be executed simultaneously on the nodes of a network to less than or equal to the number (L) of licenses that are authorized on said network for said given computer program, each of said nodes having a system memory, license memory means for indicating characteristics of said licenses and a directory for identifying said licenses stored in said license memory means, said license management system comprising:

means for loading a copy of said given computer program onto each of said nodes on which it is desired to execute said given computer program, each said copy of said given computer program being current with respect to time when its term of authorized use has not expired;

means for loading L licenses into said license memory means on said nodes of said network such that no more than L copies of said given computer program can be executed simultaneously on said network, said loading means assigning to each said license an identification that is unique to said license at said node at the time of such assignment;

license management means for identifying an inactive one of said licenses at a selected one of said nodes at which it is desired to execute a copy of said given computer program, said license being inactive when said copy of said given computer program at said one of said nodes is not being executed, said license management means including for each said node a separate license manager corresponding to said copy of said given computer program at said node such that at a first of said nodes there is a first license manager and a first copy of said given computer program and at a second of said nodes there is a second license manager and a second copy of said given computer program;

said first copy of said given computer program being adapted to request from said first license manager the execution of said first copy of said given computer program at said first node;

said first license manager being responsive to said request for searching said directory at said first node for one of said licenses, and upon determining that none of said

licenses is inactive at said first node said first license manager being effective for searching said directories at said second node for a license;

said first license manager being effective, in response to locating an inactive current license at said second node, for transferring said license to said system memory at said first node, and upon said transfer said first license manager being effective for causing a unique identification to be assigned to said license transferred to said first node;

means effective upon transfer of said transferred license to said system memory for erasing said transferred license from said license memory means at said second node;

said first license manager being effective for writing said unique identification and said license into said license memory means at said first node; and

said first license manager being effective for comparing said unique identification in said license memory means to said unique identification in said system memory and in the event of a match, said first license manager then being effective for returning a message for enabling said first copy of said given computer program to be executed on said first node.

15. A method of controlling the operability of copies of a computer program on any of a plurality of workstations coupled together in a network, wherein it is required that a license be available at each said workstation at which one or more copies of said computer program are to be executed, and wherein the number of licenses for said computer program that are authorized for said network is limited, said method comprising the steps of:

storing one of said licenses on at least a selected one of said workstations;

assigning to each said stored license an identification (UID) that is different from the UID of all other ones of said licenses;

searching said selected workstation in response to a request for execution of a copy of said computer program at said selected workstation to determine whether one of said stored licenses is available for use at said selected workstation;

upon locating said available stored license at said selected workstation, comparing said UID of said located available stored license to a record of said assigned UID for said located available stored license; and

if said compared UIDs are the same, enabling said copy of said computer program to be executed at said selected workstation.

16. A method of managing licenses to limit the number (S) of copies of a given computer program that may be executed simultaneously on the nodes of a network to less than or equal to the number (L) of licenses that are authorized for said network and said given computer program, each of said nodes having a system memory, license memory means for indicating characteristics of said licenses and a directory for identifying said licenses stored in said license memory means, said method including the steps of:

loading a copy of said given computer program into said license memory means on each of said nodes on which it is desired to execute a copy of said given computer program, each said copy of said given computer program being current with respect to time when its term of authorized execution has not expired;

loading L licenses into said license memory means on said nodes of said network such that a maximum of L copies of said given computer program can be executed simultaneously on said network;

assigning to each said loaded license an identification that is unique to said license at a particular one of said nodes at the time of such loading;

identifying an inactive one of said licenses at a selected one of said nodes at which it is desired to execute a copy of said given computer program, said license being inactive when said copy of said given computer program at said selected one of said nodes is not being executed;

in response to a request for the execution of a copy of said given computer program at a first of said nodes, searching said directory at said first node for a license, and upon determining that no license is at said first node or that all licenses are active at said first node, sequentially searching said directories at ones of said nodes other than at said first node for an inactive, current license;

transferring to said first node an inactive current license located at another one of said nodes;

assigning a unique identification to said license transferred to said first node;

erasing the unique identification of said transferred license from said other node; and

returning a run message to enable said copy of said given computer program to be executed on said first node.

17. A management system according to Claim 10, further comprising:

said storing means also stores one of said licenses on one of said workstations other than said selected workstation;

means responsive to said searching means not locating an available one of said licenses at said selected workstation but locating of one of said licenses at said workstation other than said selected workstation for determining that said license at said other workstation is available at said other workstation, said determining means being effective to transfer said available license from said other workstation to said selected workstation; and

means responsive to said transfer of said license to said selected workstation for causing said system means to assign another UID to said license transferred to said selected workstation, said other UID assigned to said transferred license being different from the UID assigned thereto prior to said transfer of said transferred license to said selected workstation and being different from the UID of all other ones of said licenses.

18. A management system according to Claim 17 wherein:

said comparing means is responsive to said assignment of said other UID to said license transferred to said selected workstation for comparing said other UID to the UID stored by said system means for said transferred license, said comparing means enabling said copy of said given computer program to be executed on said selected workstation in the event that said compared UID's are the same.

19. A management system according to Claim 10, wherein:

said comparing means also determines whether said available license at said selected workstation is current, and if current and if said compared UID's are the same, said comparing means enables said copy of said given computer program at said selected workstation to be executed.

20. A management system according to Claim 10, wherein:

said storing means includes means for encrypting said UID; and

said comparing means decrypts said UID before performing said comparison.

21. A management system according to Claim 10, wherein:

said storing means also stores data indicating whether said license is valid and is in use.

22. A management system according to Claim 17, further comprising:

means for encrypting said UID of said license transferred to said selected workstation; and

means for erasing said transferred license from said other workstation so that said transferred license may run only at said selected workstation.

23. A management system according to Claim 22, in which:

said transferred license is originally in a license file at said other workstation;

said determining means includes means for copying said license file onto said selected workstation; and

said erasing means is effective in response to said operation of said copying means.

24. The computer defined in Claim 11, said selected functions further comprising:

in response to not locating one of said available licenses on said selected workstation, searching said workstations other than said selected workstation to determine whether one of said licenses is stored on said other workstation;

in response to locating one of said available licenses at said other workstation, determining that said license at said other workstation is current and valid;

transferring said available, current and valid license from said other workstation to said selected workstation; and

in response to said transfer of said available, current and valid license to said selected workstation, causing an UID to be assigned to said available, current and valid license transferred to said selected workstation, said last-mentioned UID being different from the UID of all other ones of said stored licenses.

25. The computer defined in Claim 24, said selected functions further comprising:

storing said last-mentioned UID assigned to said transferred license;

deleting said UID that was assigned to said transferred license when said transferred license was stored at said other workstation; and

enabling said copy of said given computer program to run on said selected workstation once said deleting has occurred.

26. The computer defined in Claim 11, said selected functions further comprising:

encrypting said UIDs;

storing said encrypted UIDs; and

decrypting said stored UIDs before performing said comparison.

27. The computer defined in Claim 11, said selected functions further comprising:

in response to not locating an available license on said selected workstation, searching other of said workstations for an available license; and

in response to not locating an available license on any of said other workstations, preventing said requested copy of said given computer program from being enabled to run on said selected workstation.

28. The computer defined in Claim 11, wherein a directory is provided at a workstation other than said selected workstation and said storing function also stores at least one of said licenses on said other workstation; said selected functions further comprising:

updating said directory to record said storage of one of said licenses at said other workstation;

in response to said request and the determining that no license is available at said selected workstation, searching said directory to locate one of said licenses therein;

determining that said license located in said directory is available;

performing said comparing function to determine whether said available license in said directory is valid; and

if said available license in said directory is valid, transferring said available valid license to said selected workstation.

29. A system according to Claim 12, further comprising:

said first management means including means for determining the validity of said unique identification of said license on paid second node, said determining means being effective for comparing said unique identification of said license on said second node to the record of said unique identification stored in said system means for said license on said second node.

30. A system according to Claim 29, in which:

said determining means prevents said transfer operation of said first management means unless said validity has been confirmed and said compared unique identifications are found to be the same.

31. A system according to Claim 12, said first management means further comprising the following to determine said validity:

means for encrypting and decrypting said unique identification assigned to said available license at said second node;

means responsive to said decrypted assigned unique identification for said available license at said second node for receiving from said system means said record of said unique identification corresponding to said license on said second node;

means for comparing said unique identification of said license at said second node to said record thereof from said system means; and

means responsive to a match of said two last mentioned unique identifications for rendering said available license at said second node transferable to said first node.

32. A system according to Claim 12 in which a request can be made to execute a copy of said given computer program at said second node when said transferred license is still on said first node, said system further comprising:

second management means linked to a copy of said given computer program at said second node for receiving said request for execution at said second node and searching said directory at said second node to determine that said license is not on said second node, said second management means being effective for searching said directory on said first node to determine that said license is on said first node;

said second management means being effective in response to said latter determination for transferring said license from said first node to said second node if said license on said first node is valid and not in use at said first node and has not expired; and

said second management means being effective upon completion of said transfer for requesting said system means to assign a unique identification to said license transferred to said second node.

33. A license management system according to Claim 14, wherein:

each of said first and second license managers is effective, in response to a request to execute a copy of said given computer program made when L copies of said given computer program are already being executed, to prevent the execution of any other copies of said given computer program until one of said L license becomes inactive.

34. A license management system according to Claim 33, wherein:

said first license manager means encrypts said unique identification assigned to said transferred license and causes said encrypted unique identification to be stored in said license memory means at said first node.

35. The method according to Claim 15, wherein said storing step also stores at least one of said licenses on an other one of said workstations, further comprising the steps of:

upon failing to locate an available license at said selected workstation, continuing said search at said other workstation of said network;

upon locating one of said licenses at one of said workstations other than said selected workstation, determining that said license on said other workstation is available for use at said other workstation and then performing said comparing step;

transferring said available license from said other workstation to said selected workstation; and

upon transferring said available license to said selected workstation, causing another UID to be assigned to said license at said selected workstation.

36. A method according to Claim 35, wherein said comparing step is performed upon said assignment of said other UID to said license transferred to said selected workstation, said comparing being of said other UID to the record of said other UID for said transferred license; further comprising the step of:

enabling said copy of said computer program to be executed at said selected workstation in the event that said last mentioned compared UIDs are the same.

37. The method according to Claim 15, further comprising the steps of:

encrypting said UID assigned to a stored license; and

decrypting said UID before performing said comparison step.

38. The method according to Claim 15, further comprising the steps of:

storing data with said located license to indicate whether or not said located license is valid and is in use; and

said comparing step is performed in response to said data indicating that said located license is available for use at said selected workstation.

39. The method according to Claim 16, further comprising the steps of:

encrypting said UID of said license transferred to said first node; and

erasing from said other node the UID of said transferred license so that said transferred license is operative only at said first node.

40. The license management method according to Claim 16, further comprising the steps of:

encrypting the unique identification assigned to each said license; and

decrypting the unique identification of said license at another one of said nodes so that said license can be identified as a current, inactive license prior to transfer thereof to said first node.

41. A license management system according to Claim 5, wherein:

said first management means searches said nodes in addition to said first and second nodes until an available one of said licenses is located or all of said nodes of said network have been searched without locating an available license; and

in response to said search of all said nodes without locating an available license, said first management means returns a message to said copy of said given computer program at said first node to prevent said copy of said given computer program from running on said first node so that the number of copies of said given computer program running simultaneously on said network is limited to the number of licenses authorized.

42. A license management system according to Claim 2, wherein:

said license file means includes a license pool capable of storing up to the authorized number of licenses; and

said license management means being effective, in response to determining that said located license file means is valid and that a license in said located license file means is available, for decrementing the number of available licenses in said located file means.

43. A license management system according to Claim 42, wherein:

said license management means also writes data into said license pool to indicate the nodes at which a copy of said given computer program is being run under one of said licenses.

44. A license management system according to Claim 2, wherein:

said license management means includes means for encrypting said unique identification assigned to said license file means and for decrypting said unique identifications prior to comparing said unique identifications.

45. A management system according to Claim 3, wherein:

said license file means includes a license pool capable of storing up to the authorized number of license; and

said license management means being effective, in response to determining that said located license file means is valid and that a license in said located license file means is available, for decrementing the number of available licenses in said located file means.

46. A management system according to Claim 45, wherein:

said license management means also writes data into said license pool to indicate the nodes at which a copy of said given computer program is being run under one of said licenses.

47. A computer according to Claim 4, wherein a plurality of licenses are in said license file, and wherein said computer is programmed to perform the following additional function:

in response to determining that one of said licenses is so available, modifying said license file so that it indicates that one fewer license is available for authorizing use of a copy of said given computer program.

48. A computer according to Claim 47, that is programmed to perform the following additional function:

further modifying said license file so that it indicates said particular workstation at which said copy of said given computer program is being executed under authorization of said formerly available license.

49. A license management system according to Claim 5, wherein:

each said license file means at said nodes contains more than one of said licenses;

said first management means searches said license file means at said second node only when said license file means at said first node is invalid or all said licenses at said first node are in use; and

said first management means being effective to modify said license file means at said second node before returning said status so that said license file means at said second node indicates that one more license is in use.

50. A method of controlling the operability of copies of a computer program according to Claim 7, wherein said storing step stores the total number of authorized licenses in said license file on said selected workstation; said method further comprising the step of:

each time a copy of said computer program is enabled to be executed, said license file is updated to decrease the number of inactive licenses therein.

51. A method of controlling the operability of copies of a computer program according to Claim 50, wherein:

each time said license file is updated data is entered therein identifying the copy of said computer program that is authorized to be executed and the workstation on which it is authorized.

52. A method according to Claim 8, wherein said loading step only loads said L licenses onto said license memory means at said first node, said method further comprising the steps of:

upon determining that no available licenses for said copy of said given computer program are at any of said nodes, returning a status to said copy of said given computer program at said first node indicating that said copy is not authorized to be executed.

53. A license management system for limiting the number of copies of a given computer program that are permitted to run simultaneously on one or more nodes of a network in which said nodes are connected, said limiting being according to the number of licenses for said given computer program that are authorized for said network; said system comprising:

license file means on at least one of said nodes for storing at least one of said licenses;

program storage means for storing a copy of said given computer program on at least one of said nodes; and

license management means responsive to a request to run from one of said copies for locating one of said license file means that has a license that is available for authorizing use of a copy of said given computer program at a local one of said nodes;

said license management means being responsive to not locating one such license file means having an available license for returning to said requesting copy a message preventing said copy from being executed in response to said request.

54. A license management system according to Claim 53, wherein:

said license file means includes a license pool capable of storing up to the authorized number of licenses; and

said license management means being effective, in response to locating one of said license file means having a license that is available, for decrementing the number of available licenses in said located file means.

55. A license management system according to Claim 54, wherein:

said license management means also writes data into said located license file means to indicate the node at which said given computer program is being run under said license.

56. A license management system according to Claim 53, further comprising:

means for assigning a unique identification to each of said license file means;

said license management means being effective upon location of any one of said license file means to compare the unique identification of said located license file means to the unique identification assigned to said located license file means by said assigning means to determine whether said license file means is valid, said license management means being effective in response to a determination that said located license file means is valid for determining whether any of said licenses in said located license file is available for authorizing use of a copy of said given program, said licenses being not available to authorize use of said copy of said given computer program if either said unique identification of said license file means is invalid or if all of said licenses are being used.

57. A management system for controlling the operability of a computer program accessed from any of a plurality of workstations coupled together in a network, wherein it is required that a license be available in order to enable said workstation to operate using a copy of a given one of said computer program and wherein the number of licenses for said given computer program that is authorized on said network is limited so that the number of copies of said given computer program that can run simultaneously on said network is limited, said system comprising:

license file means for storing at least one of said licenses on at least a selected one of said workstations;

system means for assigning to said license file means and storing an identification (UID) that is unique to said license file means; and

means responsive to a request from any of said workstations for execution of a copy of said given computer program for searching to locate said license file means at any of said workstations, said searching means being responsive to locating said license file means at said selected workstation for comparing said UID of said license file means to the UID stored by said system means for said license file means and, if said compared UIDs are the same, and if a license in said located license file means is not in use, enabling said selected workstation to operate using said computer program.

58. A management system according to Claim 57, wherein:

said license file means includes a license pool capable of storing up to the authorized number of licenses; and

said license management means being effective, in response to determining that said located license file means is valid and that a license in said located license file means is available, for decrementing the number of available licenses in said located file means.

59. A management system according to Claim 57, wherein:

said license management means also writes data into said license pool to indicate the one of said nodes at which a copy of said given computer program is being run under one of said licenses.

60. A license management system for controlling the availability for use of copies of a given computer program, said copies being used in response to requests for use from nodes connected in a network, wherein a license is required for each copy of said computer program that is to run simultaneously with other copies of said computer program, and wherein the number of licenses authorized for said network and said given computer program is limited, wherein a directory is on each of said nodes for indicating which licenses are on particular ones of said nodes, and wherein said request can be made to use a copy of said given computer program when no license is available that requests such use but is available at a second node, said system including:

license file means for containing at least one of said licenses;

system means for assigning a unique identification to each of said license file means and for storing a record of each of said unique identification; and

first management means for receiving said request and searching said license file means at said second node to determine that said license files means is at said second node;

said first management means being effective in response to said determination for comparing said UID of said license file means at said second node to said record of said UID in said

system means to determine that said license file means at said second node is valid, and then to determine that at least one license therein is not in use;

said first management means being effective upon making both said determinations for returning a status to said node indicating that said copy of said given computer program is authorized to run.

61. A license management system according to Claim 60, wherein:

each said license file means contains more than one of said licenses;

said first management means searches said license file means at said second node only when a license file means at said requesting node is invalid or all said licenses at said first node are in use; and

said first management means being effective to modify said license file means at said second node before returning said status so that one more license is recorded in said license file means as being in use at said second node.