A lap desk for supporting a mobile computer includes user-configurable accessory devices which attach to the side of the desk. The accessory devices may be attached to either side of the desk for right- or left hand support, and to allow multiple devices to be attached at one time. Accessory devices may include a mouse pad, calculator, lamp, notepad, document holder, cup warmer, snack tray, among others. One or more accessory devices may be stored in a compartment integral to the lap desk.
Fig. 5a

Fig. 5b
MOBILE COMPUTER DESK
CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of the filing date of copending provisional application U.S. Ser. No. 60/774,414, filed Feb. 17, 2006, entitled “MOBILE COMPUTER DESK”, which is incorporated by reference herein.

STATEMENT OF FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not Applicable

BACKGROUND OF THE INVENTION


[0004] This invention relates in general to computer accessories and, more particularly, to a lap desk for a mobile computer.

[0005] 2. Description of the Related Art

[0006] Mobile computers now account for almost half of all computer sales. Mobile computers now have the computing power and functionality of a desktop computer and provide the additional functionality of providing computing power wherever desired.

[0007] Many mobile computer users place the mobile computer on their laps during a computing session. This placement of the computer has several disadvantages. First, mobile computers often have air vents in the back and placing the computer on a soft surface (such as a bed, pillow, couch or user’s lap) can partially or fully block those vents, resulting in overheating of the internal components. Second, a mobile computer can generate a significant amount of heat at its bottom surface, which can cause user discomfort. Third, user of some peripherals, such as a mouse, is difficult while the user is in a sitting position.

[0008] Accordingly, many users have purchased lap desks for placing between the user’s lap and the mobile computer. Typical lap desks provide a flat surface for the mobile computer, some having additional space to operate a mouse on the side. Beyond that, they offer very little functionality.

[0009] Therefore a need has arisen for a mobile computing desk with added functionality for users.

BRIEF SUMMARY OF THE INVENTION

[0010] In the present invention, a computer lap desk includes a body portion having an upper surface for supporting a mobile computing device, with the body portion having a first attachment means. One or more accessories each have second attachment means for engaging with the first attachment means to secure the accessory to the body portion.

[0011] The present invention provides flexibility to a user to design a mobile computing desk top that suits the needs of the user. By providing interchangeable accessory devices, the user can change the configuration of the desk as desired.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0012] For a more complete understanding of the present invention, and the advantages thereof, reference is now made to the following descriptions taken in conjunction with the accompanying drawings, in which:

[0013] FIG. 1 illustrates a perspective view of an improved lap desk for mobile computer with a mouse accessory device;

[0014] FIGS. 2a through 2c illustrate top, bottom, and side views of the lap desk of FIG. 1;

[0015] FIG. 3 illustrates a keypad accessory device;

[0016] FIG. 4 illustrates a calculator accessory device;

[0017] FIG. 5a through 5c illustrates a lamp and notepad accessory device;

[0018] FIG. 6 illustrates a lamp and document holder accessory device;

[0019] FIG. 7 illustrates a USB cup warmer accessory device;

[0020] FIG. 8 illustrates a snack holder accessory device.

DETAILED DESCRIPTION OF THE INVENTION

[0021] The present invention is best understood in relation to FIGS. 1-8 of the drawings, like numerals being used for like elements of the various drawings.

[0022] FIG. 1 illustrates a perspective view of an improved lap desk 10 for mobile computers with a mouse accessory device and FIGS. 2a through 2c illustrate top, bottom, and side views of the lap desk of FIG. 1, respectively. Lap desk 10 includes a top surface 12 upon which a mobile computer can be placed. An integrated handle 14 is formed through the top surface (or, alternatively, mounted to the top of the desk 10. Non-slip surfaces 16 are provided at the top and bottom of the top surface 12 prevent the mobile computer from slipping off the top surface 12. Tabs 18 rotate upward (see magnified view) to hold the computer at a better angle for typing and to provide additional airspace for the fans of the mobile computer. An armrest 20 provides comfort and stability to the user’s wrists while typing.

[0023] Slots 22 are formed into the lap desk 10 at both sides of the top surface 12. Slots 22 have a bottom surface 24 (best shown in FIG. 2c). The slots 22 align with tabs 25 on various accessory devices 26, described below. FIG. 1 illustrates a mouse tray 28 which mounts onto lap desk 10 using slots 22 to provide an additional surface to the lap desk 10 for using a mouse or similar device. The slots 22 on the lap desk 10 and the tabs 25 on an accessory device are arranged in a symmetrical manner to allow accessory devices 26 to be attached to either side of the lap desk 10.

[0024] The bottom surface 30 of the lap desk, shown in FIG. 2b, includes leg rests 32 to raise the desk off of a user’s lap to further remove the user from heat generated by the mobile computer. The leg rests 32 also have a non-slip surface to prevent the desk from slipping off of the user’s lap. Storage space 34, including slots 36 and clip 38, is used to store an accessory device underneath the lap desk 10 for storage and travel.

[0025] In operation, the user may snap one or two accessory devices onto the sides of the lap desk (more accessory slots could be provided on the lap desk 10 to hold even more accessory devices). The user may exchange the accessory
devices as desired. Since the accessory devices are not fixedly integrated with the lap desk, the user can purchase any desired configuration of devices.

[0026] While not shown, the desk 10 could include a subset of the following devices: storage compartments for paper clips/office supplies, pens and pencils, mobile phone/PDA (personal digital assistant), screen wiping pads, business cards, eye glasses, batteries, cables, business cards, and business receipts/miscellaneous papers. The compartments could be drawers which slide out of the desk, or cavities formed in the top surface 12.

[0027] In addition, the desk 10 could incorporate active devices used in connection with the mobile computer. For example, the desk 10 could include an integrated USB (Universal Serial Bus), Firewire, or other connection type, hub for providing data connections to a plurality of devices. Also, a memory reader for reading a plurality of memory types, such as FLASH memory, could be built into the desk. Also, the desk 10 could include an auxiliary battery for the mobile computer, similar to universal rechargeable battery types which provide a DC input to the mobile computer at a selected voltage level and polarity configuration.

[0028] For additional user comfort, the arm rest support 20 could include an imbedded magnet to help blood circulation in the user's wrist to alleviate fatigue while typing. A warming pad could be provided for warming cold hands. A personal aroma therapy pad could provide relaxing or stimulating aromas.

[0029] FIG. 3 illustrates a numeric keypad accessory device 40. The keypad device 40 uses a USB (Universal Serial Bus) connection 42, or other suitable connection, to interface with the mobile computer. Using USB, or similar technology, the operating system of the mobile computer will recognize the keypad device and load the appropriate driver once the keypad device 40 is connected to the mobile computer. In the preferred embodiment, the cable of the keypad device can be stored underneath the device. Alternatively, a wireless technology, such as wireless USB or Bluetooth can be used to provide a data connection to the mobile computer.

[0030] FIG. 4 illustrates a calculator accessory device 44. The calculator accessory device provides a calculator 46 and tray 48. The calculator 46 can be removed from the tray, if desired.

[0031] FIGS. 5a through 5c illustrate a lamp and notepad accessory device 50. FIG. 5a illustrates a perspective view from the top of the lamp and notepad accessory 50, with the pad cover 52 closed and the lamp 54 disposed in a socket 56. There are sockets 56 on both the front and back of the lamp and notepad accessory 50 for use on either the right- or left-hand side of the desk 10. A pen compartment 58 holds a pen or pencil 60. FIG. 5b illustrates a top view of the lamp and notepad accessory 50, with the pad cover 52 open, and FIG. 5c illustrates a bottom view of the lamp and notepad assembly 50 showing the battery compartment 62 and lamp storage 64 for the lamp when not in use.

[0032] In operation, the lamp and notepad accessory can be used as a mouse pad with the notepad compartment closed. When needed, the cover 52 is opened to reveal a notepad (the compartment beneath the cover 52 could be used to hold other items as well, such as sticky notes and paper clips). When illumination is needed, the lamp can be removed from the bottom of the accessory 50 and placed in either socket 56 for an electrical connection. As shown, a battery is used to power the lamp; alternatively, the lamp could be powered from the USB (or other) connection from the mobile computer.

[0033] FIG. 6 illustrates a lamp and document holder accessory device 70 which is mounted onto the side of the desk 10. In the illustrated embodiment, the lamp and document holder accessory uses a clamp 72 to attach to the side of the desk 10; alternatively, if slots 22 were available at the top of the desk, the lamp and document holder 70 could be mounted in these slots. The clamp 72 is connected to a lamp 74 via a flexible shaft 76. In the illustrated embodiment, the lamp 74 swings outwardly from base 78. Base 78 includes the document holder 80.

[0034] In operation, the lamp 74 receives battery power from the base 78 (or, alternatively, from another power source, such as a USB connection, or automotive/airline power source) to illuminate a document in document holder 80. When not in use, the lamp swings over the base 78 for compact storage.

[0035] FIG. 7 illustrates a USB cup warmer accessory device 90. The cup warmer device 90 attaches to slots 22 and provides a heated base for a cup through heating elements 92. The electricity for heating the cup can come from a battery or from another power source, such as a USB connection.

[0036] FIG. 8 illustrates a snack holder accessory device 100 for holding snacks. The accessory provides a bowls 102 to hold snacks such as chips/dip or nuts and could also include a cup holder for a drink.

[0037] While a number of accessory devices are described herein, the number and shape of the accessory devices could vary from that shown. Additional some accessory devices could be two sided; for example, a single accessory device could provide a mouse pad on one side and a calculator on the other side.

[0038] It should be noted that other mechanisms for attaching the accessory devices to the side of the desk could be employed. Further the number of slots and number of storage compartments for the accessory devices could be varied as desired for a particular design.

[0039] Although the Detailed Description of the invention has been directed to certain exemplary embodiments, various modifications of these embodiments, as well as alternative embodiments, will be suggested to those skilled in the art. The invention encompasses any modifications or alternative embodiments that fall within the scope of the Claims.

1. A computer lap desk comprising:
   a body portion having an upper surface for supporting a mobile computing device, said body portion having a first attachment means;
   one or more accessories each having second attachment means for engaging with the first attachment means to securing the accessory to the body portion.
2. The computer lap desk of claim 1 wherein said body portion includes first attachment means on both right and left sides of the body portion.
3. The computer lap desk of claim 2 wherein at least one of the accessories can be attached to either a first attachment means on the right side or to a first attachment means on the left side of the body portion.

4. The computer lap desk of claim 1 wherein said body portion includes a compartment formed in a lower surface for storing one or more accessories.

5. The computer lap desk of claim 1 wherein one of said accessories is a mouse pad.

6. The computer lap desk of claim 1 wherein one of said accessories is a numeric keypad with a data connection to the computer.

7. The computer lap desk of claim 1 wherein one of said accessories is a calculator.

8. The computer lap desk of claim 1 wherein one of said accessories is a lamp accessory.

9. The computer lap desk of claim 8 wherein the lamp accessory includes a light coupled to a flexible conduit that attaches to a base portion.

10. The computer lap desk of claim 9 wherein the base includes a notepad.

11. The computer lap desk of claim 9 wherein the light and conduit may be stored in the base.

12. The computer lap desk of claim 1 and further comprising a light and document holder that clamps to the side of the body portion.

13. The computer lap desk of claim 1 wherein one of the accessories is a cup warmer.

14. The computer lap desk of claim 1 wherein one of the accessories is a snack holder.

15. The computer lap desk of claim 1 wherein the body portion includes a data hub.

16. The computer lap desk of claim 15 wherein the data hub is a USB hub.

17. The computer lap desk of claim 1 wherein the body portion includes a memory card reader.

18. The computer lap desk of claim 1 and further comprising a magnetic wrist pad attached to the upper surface of the body portion.

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