Further, the high media transport speeds used in such media width printers have typically lead to more complex media transport systems in the printers, due to the need to minimize media feed errors. Thus, there is a need to have a media transport solution that is simpler and more reliable for media wide printing systems.

SUMMARY OF INVENTION

In an aspect, the invention provides a maintenance system for a printhead, the system comprising: a sled slidably arranged with respect to the printhead; a plurality of maintenance modules supported by the sled; a selection mechanism for selectively sliding the sled to align one of the maintenance modules with the printhead; and a lift mechanism comprising: a lift arm for engaging with a selected module only when the selected module is aligned with the printhead; and a motor for causing the lift arm to lift and lower the selected module, the lifted position being in proximity of the printhead, wherein the lift arm is engageable with each of the modules.

In one ~~aspect~~embodiment, the invention provides a maintenance system for a printhead, the system comprising:

a sled slidably arranged with respect to the printhead;

a media platen module supported by the sled;

a capper module supported by the sled;

a wiper module supported by the sled; and

a selection mechanism for selectively sliding the sled to align one of the platen, capper and wiper modules with the printhead, and for moving the aligned module to a position in proximity of the printhead.

Optionally, the platen, capper and wiper modules are serially arranged on the sled.

Optionally, the printhead is a media width printhead and the platen, capper and wiper modules each have a length corresponding to the media width.

Optionally, the selection mechanism comprises a rack and pinion mechanism for the selective sliding of the sled.

Optionally, the rack and pinion mechanism comprises a rack on each end of the sled corresponding to each end of the platen, capper and wiper modules, and a pinion gear on each end of a shaft so as to each couple with a corresponding one of the racks and a motor.

Optionally, the selection mechanism further comprises a sensor for sensing a position of the platen, capper and wiper modules.

Optionally, the selection mechanism further comprises a controller connected to the sensor and motor.

Optionally, the controller controls operation of the motor in response to a sensing result output by the sensor.

Optionally, the selection mechanism comprises a lift mechanism for said movement of the aligned module, the lift mechanism comprising a lift arm for engaging with the

aligned module and a motor for causing the lift arm to lift and lower the engaged module, the lifted position being in proximity of the printhead.

Optionally, the lift mechanism further comprises a cam engaged with the motor, the cam arranged to be engaged and disengaged with the lift arm to cause said lifting and lowering of the engaged module.

Optionally, the lift mechanism further comprises a spring attached to the lift arm for biasing the lift arm to the lowered position.

In another ~~aspect~~embodiment, the invention provides a printer comprising:

a media width printhead;

a sled slidably arranged with respect to the printhead;

a media platen module supported by the sled;

a capper module supported by the sled;

a wiper module supported by the sled; and

a selection mechanism for selectively sliding the sled to align one of the platen, capper and wiper modules with the printhead, and for moving the aligned module to a position in proximity of the printhead.

Optionally, the platen, capper and wiper modules are serially arranged on the sled.

Optionally, the printhead is a media width printhead and the platen, capper and wiper modules each have a length corresponding to the media width.

Optionally, the selection mechanism comprises a rack and pinion mechanism for the selective sliding of the sled.

Optionally, the rack and pinion mechanism comprises a rack on each end of the sled corresponding to each end of the platen, capper and wiper modules, and a pinion gear on each end of a shaft so as to each couple with a corresponding one of the racks and a motor.

Optionally, the selection mechanism further comprises a sensor for sensing a position of the platen, capper and wiper modules.

Optionally, the selection mechanism further comprises a controller connected to the sensor and motor.

Optionally, the controller controls operation of the motor in response to a sensing result output by the sensor.

Optionally, the selection mechanism comprises a lift mechanism for said movement of the aligned module, the lift mechanism comprising a lift arm for engaging with the aligned module and a motor for causing the lift arm to lift and lower the engaged module, the lifted position being in proximity of the printhead.

Optionally, the lift mechanism further comprises a cam engaged with the motor, the cam arranged to be engaged and disengaged with the lift arm to cause said lifting and lowering of the engaged module.

Optionally, the lift mechanism further comprises a spring attached to the lift arm for biasing the lift arm to the lowered position.

In another ~~aspect~~embodiment, the invention provides method of maintaining a printhead, the method comprising:

when printing with the printhead, translating a modular sled relative to the printhead so as to align a media platen module supported by the sled with the printhead;

after printing with the printing, translating the sled relative to the printhead so as to align a wiper module supported by the sled with the printhead and operating a wiper roller of the wiper module so as to wipe a printing face of the printhead; and

after said wiping and prior to commencement of printing with the printhead, translating the sled relative to the printhead so as to align a capper module supported by the sled with the printhead so as to cap the printing face of the printhead.

Optionally, the printhead is a media width printhead and the platen, capper and wiper modules each have a length corresponding to the media width.

Optionally, the sled is translated by operation of a pinion gear on a rack of the sled.

Optionally, the sled comprises a rack on each end of the sled corresponding to each end of the platen, capper and wiper modules, and a pinion gear on each end of a shaft so as to each couple with a corresponding one of the racks and a motor.

Optionally, the method further comprises sensing with a sensor a position of the platen, capper and wiper modules relative to the printhead.

Optionally, the method further comprises displacing each aligned module relative to the sled to place the aligned module in proximity of the printhead.

In another ~~aspect~~embodiment, the invention provides a printing assistance apparatus for a printhead, the apparatus comprising:

a platen for supporting media during printing on the media by the printhead; and

a wick element positioned within the platen, the wick element being formed of porous material so that fluid on said platen is transferred from the platen by wicking to the porous material.

Optionally, the printhead is a media width printhead and the platen and wick element each have a length greater than the media width.

Optionally, the platen comprises a slot having a longitudinal length along the media width, the wick element being located in the slot.

Optionally, the wick element is removably clipped within the slot.

Optionally, the platen comprises datum elements which contact the printhead so that a surface of the platen which supports the media is spaced from fluid ejection nozzles of the printhead by a first distance, the wick element being positioned within the platen so that wick element is spaced from the nozzles by a second distance greater than the first distance.

Optionally, the porous material of the wick element is hydrophilic polyethylene.

In another ~~aspect~~embodiment, the invention provides a printing assistance apparatus for a media width printhead, the apparatus comprising:

an elongate platen having a surface for supporting media across the media width during printing on the media by fluid ejection nozzles of the printhead; and

a wick element positioned within the platen for wicking fluid ejected by the nozzles from said supporting surface, the wick element having an elongate body positioned within the platen and a plurality of pads projecting from the body along the longitudinal length body toward the printhead, the pads being separated by notches.

Optionally, the wick element is formed of porous material.

Optionally, the platen comprises a slot having a longitudinal length along the media width, the wick element being located in the slot.

Optionally, the wick element is removably clipped within the slot.

Optionally, the platen comprises datum elements which contact the printhead so that the supporting surface is spaced from the nozzles by a first distance, the wick element being positioned within the platen so that wick element is spaced from the nozzles by a second distance greater than the first distance.

In another ~~aspect~~embodiment, the invention provides a printing assistance apparatus for a media width printhead, the printhead having a plurality of rows of fluid ejection nozzles extending along the media width, the apparatus comprising:

an elongate platen having a surface for supporting media across the media width as the media travels past the printhead along a media travel direction, the platen having an elongate slot along the media width;

a wick element positioned within the slot for wicking fluid ejected by the nozzles from said supporting surface; and

an alignment mechanism for aligning the platen with the printhead so that the opposed longitudinal edges of the slot are respectively positioned upstream and downstream of the media travel direction with respect to a centerline along the length the nozzle rows with the upstream edge being closer to the centerline than the downstream edge such that an upstream surface area of the wick element is less than a downstream surface area of the wick element

Optionally, the wick element is formed of porous material.

Optionally, the wick element is removably clipped within the slot.

Optionally, the platen comprises datum elements which contact the printhead so that the supporting surface is spaced from the nozzles by a first distance, the wick element being positioned within the slot so that wick element is spaced from the nozzles by a second distance greater than the first distance.

In another ~~aspect~~embodiment, the invention provides a system for shaping media for printing by a media width printhead, the system comprising:

a media width printhead having a plurality of fluid ejection nozzles defining a media width print zone;

input rollers disposed relative to the printhead so as to transport media into the print zone at an angle to a plane parallel with the print zone;

output rollers disposed relative to the printhead so as to transport media out of the print zone at an angle to a plane parallel with the print zone; and

an elongate platen for supporting and shaping the media as the media is transported through the print zone, the platen having a series of upstream ribs disposed upstream of the print zone with respect to the media transport direction and a series of downstream ribs disposed downstream of the print zone with respect to the media transport direction,

wherein the ribs are configured so that the transported media adopts a constrained curved path past the nozzles through contact with the ribs in the print zone.

Optionally, the platen comprises a slot having a longitudinal length along the media width, the upstream ribs being disposed on the upstream side of the slot and the downstream ribs being disposed on the downstream side of the slot.

Optionally, an outer surface of each of the upstream ribs is angled with respect to said parallel plane such that a portion of each of the upstream ribs closest to the slot is closer to the printhead than a portion of each of the upstream ribs furthest from the slot.

Optionally, an outer surface of each of the downstream ribs is angled with respect to said parallel plane such that a portion of each of the downstream ribs closest to the slot is closer to the printhead than a portion of each of the downstream ribs furthest from the slot.

Optionally, the input and output rollers are relatively disposed so that upstream and downstream angles to said parallel plane are about 10° to 12°.

Optionally, the platen comprises datum elements which contact the printhead so that the upstream and downstream ribs are spaced from the nozzles.

Optionally, the ribs are periodically positioned along the elongate length of the platen and are each aligned with the media transport direction along their respective length.

Optionally, the platen is formed of a molded plastics material body and the ribs are integrally molded in the body.

In another ~~aspect~~embodiment, the invention provides a method of shaping media for printing by a media width printhead, the method comprising:

transporting media into a print zone defined by a plurality of fluid ejection nozzles of the printhead with input rollers at an angle to a plane parallel with the print zone;

transporting media out of the print zone with output rollers at an angle to said parallel plane; and

supporting and shaping the media as the media is transported through the print zone with an elongate platen, the platen having a series of upstream ribs disposed upstream of the print zone with respect to the media transport direction and a series of downstream ribs disposed downstream of the print zone with respect to the media transport direction,

wherein the ribs are configured so that the transported media is in contact with the ribs in the print zone and adopts a constrained curved path past the nozzles.

Optionally, the platen comprises a slot having a longitudinal length along the media width, the upstream ribs being disposed on the upstream side of the slot and the downstream ribs being disposed on the downstream side of the slot.

Optionally, an outer surface of each of the upstream ribs is angled with respect to said parallel plane such that a portion of each of the upstream ribs closest to the slot is closer to the printhead than a portion of each of the upstream ribs furthest from the slot.

Optionally, an outer surface of each of the downstream ribs is angled with respect to said parallel plane such that a portion of each of the downstream ribs closest to the slot is closer to the printhead than a portion of each of the downstream ribs furthest from the slot.

Optionally, the media is transported into the print zone so that a leading edge of the media contacts the outer surfaces of the upstream ribs, is guided towards the printhead along the outer surfaces, then passes over the slot and through the print zone of the nozzles, at which point the media bends in a cantilevered fashion such that only point-contact with said closest portions of the upstream ribs is made by the remaining portions of the media.

Optionally, the media is transported through the print zone so that the leading edge of the media then point-contacts said closest portions of the downstream ribs to bridge the slot and then leaves contact with the downstream ribs to be presented to the output rollers so that the media is stably cantilevered at its point-contact with the upstream ribs.

Optionally, the media is transported out of the print zone so that a trailing edge of the media leaves the input rollers, transitions from the upstream ribs to the downstream ribs, and the leaves the print zone.

In another ~~aspect~~embodiment, the invention provides a maintenance apparatus for a printhead, the apparatus comprising:

a rotatable shaft;

a porous material about the shaft; and

a mechanism for rotating the shaft so that the porous material rotates against the printhead, the porous material being configured to absorb fluid from the printhead during said rotation.

Optionally, the mechanism comprises a gear train rotatably mounted within a swing arm pivotally mounted to one end of the shaft.

Optionally, the apparatus further comprises a sled and a wiper module supported by the sled, the shaft being rotatably mounted in the wiper module.

Optionally, the apparatus further comprises a lift mechanism for lifting the wiper module from the sled to position the porous material in proximity of the printhead.

Optionally, the apparatus further comprises a media transport roller for transporting media past the printhead, the media transport roller having a gear which operatively contacts the gear train of the swing arm as the wiper module is lifted from the sled such that rotation of the media transport roller causes rotation of the shaft.

Optionally, the wiper module is arranged so that the gear train contacts the media transport roller gear to commence rotation of the shaft when the wiper module is remote from the printhead.

Optionally, the swing arm is configured to pivot relative to the wiper module so that the gear train remains in contact with the media transport roller gear independent of the lifted position of the wiper module.

Optionally, the apparatus further comprises a compressible core mounted to the shaft, the porous material being provided over the core,

wherein the lift mechanism is configured to position the porous material against the printhead so as to compress the compressible core.

Optionally, the core is formed of extruded closed-cell foam.

Optionally, the porous material is formed of non-woven microfiber.

Optionally, the non-woven microfiber is wrapped about the core by a spiralling technique so that at least two layers of the microfiber are present about the core with an adhesive between the layers.

Optionally, the apparatus further comprises a hydrophobic film is disposed between the core and the porous material.

Optionally, the film is formed of a pressure sensitive adhesive.

In another ~~aspect~~embodiment, the invention provides a maintenance system for a printhead, the system comprising:

a sled;

a wiper module supported by the sled, the wiper module comprising a rotatable shaft and a porous material about the shaft;

In another ~~aspect~~embodiment, the invention provides a method of wiping a printhead, the method comprising:

controlling a lift mechanism to lift a wiper module from a supporting sled to position a porous material of the wiper module against the printhead;

controlling a rotation mechanism to rotate a shaft of the wiper module about which the porous material is provided so that the porous material rotates against the printhead, the porous material being configured to absorb fluid from the printhead during said rotation; and

controlling a sliding mechanism to slide the sled relative to the printhead so that the rotating porous material is wiped across the printhead.

Optionally, the rotation mechanism is controlled so that a gear train rotatably mounted within a swing arm pivotally mounted to one end of the shaft contacts a media transport roller for transporting media past the printhead, the media transport roller having a gear which operatively contacts the gear train of the swing arm as the wiper module is lifted from the sled by the lift mechanism such that rotation of the media transport roller causes rotation of the shaft.

Optionally, the swing arm is configured to pivot relative to the wiper module so that the gear train remains in contact with the media transport roller gear independent of the lifted position of the wiper module.

Optionally, the sliding mechanism is controlled by operating a motor to rotate a pinion gear on each end of a shaft along a rack on each end of the sled corresponding to each end of the wiper module.

Optionally, the lift mechanism is controlled to compress a compressible core to the shaft of the wiper module against the printhead.

In another ~~aspect~~embodiment, the invention provides a maintenance apparatus for a printhead, the apparatus comprising:

a porous member for rotatably contacting the printhead to absorb particulates from the printhead; and

a scraper for contacting the porous member to remove the absorbed particulates from the porous member during said rotation.

Optionally, the printhead is a media width printhead, and the porous member and the scraper are elongate with a longitudinal length of at least the media width.

Optionally, the porous member is rotatably mounted to a wiper module supported by a sled and the scraper is removably mounted to the wiper module.

Optionally, the scraper is clipped to the wiper module.

Optionally, the scraper is mounted to the wiper module so that the scraper contacts the porous member on a vertical circumferential region of the porous member below the upper circumferential region of the porous member which contacts the printhead.

Optionally, the scraper is disposed at a sloped angle relative to the porous member such that the sloped scraper contacts the porous member at a tangent to the circumference of the porous member.

Optionally, the wiper module comprises compressible core mounted to a rotatable shaft, the porous member being provided over the core.

Optionally, the porous member is formed of non-woven microfiber.

Optionally, the non-woven microfiber is wrapped about the core by a spiralling technique so that at least two layers of the microfiber are present about the core with an adhesive between the layers.

Optionally, the apparatus further comprises a hydrophobic film is disposed between the core and the porous material.

Optionally, the film is formed of a pressure sensitive adhesive.

Optionally, the scraper is mounted to the wiper module so that contact pressure is exerted on the compressible core.

Optionally, the scraper is resiliently flexible.

Optionally, the scraper is a resiliently flexible sheet of Mylar.

In another ~~aspect~~embodiment, the invention provides a maintenance apparatus for a printhead, the apparatus comprising:

a seal for sealing against a surface of the printhead which has fluid ejection nozzles, the seal being configured to form a sealed space about said nozzles; and

a porous material positioned within the seal to be in proximity of said nozzles in the sealed space, fluid egested by said nozzles contacting, and being transferred to, the porous material in the sealed space.

Optionally, the seal is formed of a resilient material.

Optionally, the apparatus further comprises a capper module having a body on which the seal is mounted and in which the porous material is disposed.

optionally, sidewalls of the seal have a wave profile with a lower section of the sidewalls defining a groove configured to be held over a ridge of the body of the capper module and an upper section of the sidewalls defining a cantilevered beam terminating at a free outer surface such that pressing contact of the outer surface against the surface of the printhead causes bending of the cantilevered beam

Optionally, a base of the body has ribs on which a lower surface of the porous material is supported.

Optionally, the porous material is a hydrophilic polyethylene.

In another ~~aspect~~embodiment, the invention provides a maintenance apparatus for a media width printhead, the printhead having a plurality of rows of fluid ejection nozzles extending along the media width for ejecting fluid onto media as the media travels past the printhead along a media travel direction, the apparatus comprising:

a seal for sealing against a surface of the printhead having the nozzle rows, the seal being configured to form a sealed space about the nozzle rows; and

a wick element positioned within the seal for wicking fluid ejected by the nozzles from the sealed space, the wick element having an outer surface sloped in the media travel direction; and

an alignment mechanism for aligning the seal with the printhead so that a portion of the sloped outer surface of the wick element closest to the printhead is positioned upstream of the media travel direction with respect to a centerline along the length the nozzle rows and a portion of the sloped outer surface of the wick element furthest from the printhead is positioned downstream of the media travel direction.

Optionally, the seal is formed of a resilient material.

Optionally, the apparatus further comprises a capper module having a body on which the seal is mounted and in which the porous material is disposed.

Optionally, sidewalls of the seal have a wave profile with a lower section of the sidewalls defining a groove configured to be held over a ridge of the body of the capper module and an upper section of the sidewalls defining a cantilevered beam terminating at a free outer surface such that pressing contact of the outer surface against the surface of the printhead causes bending of the cantilevered beam

Optionally, a base of the body has ribs on which a lower surface of the porous material is supported.

Optionally, the porous material is a hydrophilic polyethylene.

In another ~~aspect~~embodiment, the invention provides a method of maintaining a printhead comprising the steps of:

bringing a porous material within a predetermined distance from fluid ejection nozzles of the printhead at a non-printing phase of the printhead; and

holding the porous material at said predetermined distance during said non-printing phase,

wherein the predetermined distance is selected to allow a fluid flow path to form between the nozzles and porous material which causes transfer of fluid egested by the nozzles to the porous material and then induces the flow path to break off.

Optionally, the predetermined distance between the porous material and the nozzles is about 1.1 millimeters.

Optionally, the porous material is brought to said predetermined distance by a lift mechanism.

Optionally, the porous material is arranged in a capping mechanism for capping the printhead.

Optionally, the capping mechanism comprises a seal for sealing against a surface of the printhead having said nozzles, the porous material being surrounded by the seal so as to be at said predetermined distance during said sealing.

Optionally, the porous material is held at said predetermined distance by the lift mechanism.

In another ~~aspect~~embodiment, the invention provides a maintenance apparatus for a printhead, the apparatus comprising:

a first porous member for contacting the printhead to absorb fluid from the printhead; and

a second porous member for contacting the first porous member to absorb fluid from the first porous member.

Optionally, the apparatus further comprises a sled and a wiper module supported by the sled, the first porous member being mounted in the wiper module and the second porous member being mounted in the sled.

Optionally, the apparatus further comprises a lift mechanism for lifting the wiper module from the sled to position the first porous member in proximity of the printhead.

Optionally, the second porous member has a plurality of towers projecting from a pad held within a channel of the sled, the towers being arranged to contact the first porous member when the wiper module is in a non-lifted position within the sled.

Optionally, the towers are configured to project through windows in the wiper module when the wiper module is in the non-lifted position within in the sled.

Optionally, the first porous member is mounted on a compressible core and the towers are configured to compress the first porous member during said contact so that fluid held by the first porous member is wicked to the towers and into the pad.

Optionally, the compressible core is mounted on a rotatable shaft within the wiper module, the apparatus comprising a mechanism for rotating the shaft so that the first porous member rotates against the printhead when the wiper module is in the lifted position.

Optionally, the lift mechanism is configured to position the first porous member against the printhead so as to compress the compressible core.

In another ~~aspect~~embodiment, the invention provides a maintenance system for a printhead, the system comprising:

an ingestion member for ingesting waste fluid from the printhead; and

a container for containing said ingested waste fluid, the container being flexible so as to expand as an amount of contained waste fluid increases.

Optionally, the container is positioned within a body of a printer having the printhead between a media input area and a printed media output area.

Optionally, the container is a modular assembly of fluid containing modules.

Optionally, each module is formed of flexible, collapsible material so as to define expandable bags which are substantially flat when empty of fluid and are expanded otherwise.

Optionally, the ingestion member is an absorbent material which fills each module.

Optionally, the absorbent material is a polymer which is a powder when dry and a stiff gel when wet.

Optionally, the modules are linked to each other by a wick element which provides capillary wicking paths between the modules.

In another ~~aspect~~embodiment, the invention provides a printer comprising:

a printhead having a plurality of fluid ejection nozzles;

an ingestion member for ingesting waste fluid from the printhead; and

a container for containing said ingested waste fluid, the container being flexible so as to expand as an amount of contained waste fluid increases.

Optionally, the container is positioned within a body of a printer having the printhead between a media input area and a printed media output area.

Optionally, the container is a modular assembly of fluid containing modules.

Optionally, each module is formed of flexible, collapsible material so as to define expandable bags which are substantially flat when empty of fluid and are expanded otherwise.

Optionally, the ingestion member is an absorbent material which fills each module.

Optionally, the absorbent material is a polymer which is a powder when dry and a stiff gel when wet.

Optionally, the modules are linked to each other by a wick element which provides capillary wicking paths between the modules.

In another ~~aspect~~embodiment, the invention provides a media clearance mechanism for a printer, the media clearance mechanism comprising:

a door hingedly mounted to a body of the printer which can be opened to expose a media width of a media path to a media width printhead of the printer;

a media diverter mounted to the door such that when the door is in a closed position the door and the diverter define guiding portions of the path, the diverter being pivotally mounted to the door so that the diverter pivots out of the way upon opening of the door; and

a displacement mechanism configured to retract the diverter with the opening movement of the door and to reposition the diverter for media guiding with the closing movement of the door.

Optionally, the media path is a curved media path from a media input area to the printhead of the printer.

Optionally, the displacement mechanism comprises slots within sidewalls at either end of the door and tracking pins on arms at either end of the diverter, the slots having a serpentine form and the tracking pins engaging with the respective slots thereby connecting the diverter to the door

Optionally, the serpentine form of each slot has two inflection points, with the inflection point which is directed towards the media path being upstream of the inflection point which is directed away from the media path with respect to a media travel direction along the media path.

Optionally, pivot pins project from each of the sidewalls of the door at the outer side of the downstream inflection points of each slot and the free end of each arm has a yoke which engages with the respective pivot pin as the diverter tracks along the slots.

In another ~~aspect~~embodiment, the invention provides a printer comprising:

a media width printhead;

a media path from a media input area to the printhead;

a door hingedly mounted to a body of the printer which can be opened to expose the media path;

a media diverter mounted to the door such that when the door is in a closed position the door and the diverter define guiding portions of the path, the diverter being pivotally mounted to the door so that the diverter pivots out of the way upon opening of the door; and

a displacement mechanism configured to retract the diverter with the opening movement of the door and to reposition the diverter for media guiding with the closing movement of the door.

Optionally, the media path is a curved media path.

Optionally, the displacement mechanism comprises slots within sidewalls at either end of the door and tracking pins on arms at either end of the diverter, the slots having a serpentine form and the tracking pins engaging with the respective slots thereby connecting the diverter to the door

Optionally, the serpentine form of each slot has two inflection points, with the inflection point which is directed towards the media path being upstream of the inflection point which is directed away from the media path with respect to a media travel direction along the media path.

Optionally, pivot pins project from each of the sidewalls of the door at the outer side of the downstream inflection points of each slot and the free end of each arm has a yoke which engages with the respective pivot pin as the diverter tracks along the slots.

Claims

What is claimed is:

1. A maintenance system for a printhead, the system comprising: a sled slidably arranged with respect to the printhead; a plurality of maintenance modules supported by the sled; a selection mechanism for selectively sliding the sled to align one of the maintenance modules with the printhead; and a lift mechanism comprising: a lift arm for engaging with a selected module only when the selected module is aligned with the printhead; and a motor for causing the lift arm to lift and lower the selected module, the lifted position being in proximity of the printhead, wherein the lift arm is engageable with each of the modules.

2. A maintenance system according to claim 1, wherein the lift mechanism further comprises a cam engaged with the motor, the cam arranged to be engaged and disengaged with the lift arm to cause said lifting and lowering of the engaged module.

3. A maintenance system according to claim 2, wherein the lift mechanism further comprises a spring attached to the lift arm for biasing the lift arm to the lowered position.

4. A maintenance system according to claim 1, wherein the plurality of maintenance modules comprises: a media platen module; a capper module; and a wiper module.

5. A printer comprising the maintenance system according to claim 1.