touch pad **110**. As shown, there are four buttons **112**A that surround the outer perimeter and one button **112**B disposed in the center or middle of the touch pad **110**. By way of example, the plurality of buttons **112** may consist of a menu button, play/stop button, forward seek button and a reverse seek button, and the like.

[**0046**] Moreover, the media player **100** may also include a power switch **114**, a headphone jack **116** and a data port **118**. The power switch **114** is configured to turn the media device **100** on and off. The headphone jack **116** is capable of receiving a headphone connector associated with headphones configured for listening to sound being outputted by the media device **100**. The data port **118** is capable of receiving a data connector/cable assembly configured for transmitting and receiving data to and from a host device such as a general purpose computer. By way of example, the data port **118** may be used to upload or down load songs to and from the media device **100**. The data port **118** may be widely varied. For example, the data port may be a PS/2 port, a serial port, a parallel port, a USB port, a Firewire port and the like. In some cases, the data port **118** may be a radio frequency (RF) link or optical infrared (IR) link to eliminate the need for a cable. Although not shown in **FIG. 2**, the media player **100** may also include a power port that receives a power connector/cable assembly configured for delivering powering to the media player **100**. In some cases, the data port **118** may serve as both a data and power port.

[**0047**] FIGS. **3**A-**3**C show the media player **100** of **FIG. 2** being used by a user **120**, in accordance with different embodiments of the invention. In all of these embodiments, the user **120** is linearly scrolling **104** (as shown by arrow **124**) through a list of songs **122** displayed on the display screen via a slider bar **123**. As shown, the media device **100** is comfortably held by one hand **126** while being comfortably addressed by the other hand **128**. This configuration generally allows the user **120** to easily actuate the touch pad **110** with one or more fingers. For example, the thumb **130** and rightmost fingers **131** (or leftmost fingers if left handed) of the first hand **126** are used to grip the sides of the media player **100** while a finger **132** of the opposite hand **128** is used to actuate the touch pad **110**. As shown, the entire top surface of the touch pad **110** is accessible to the user's finger **130**.

[**0048**] Referring to **FIG. 3**A, and in accordance with one embodiment of the invention, the touch pad **110** can be continuously actuated by a simple swirling motion of the finger **132** as shown by arrow **134**. By swirling, it is meant that the finger moves in an arcuate or circular manner. For example, the finger may rotate relative to an imaginary axis. In particular, the finger can be rotated through 360 degrees of rotation without stopping. This form of motion may produce continuous or incremental scrolling on the display screen **104**.

[**0049**] Referring to **FIG. 3**B, and in accordance with one embodiment of the invention, the user **120** can slide his or her finger **132** radially between the inner and outer perimeter of the touch pad **110**. For example, the touch pad **110** may be actuated radially as shown by arrow **140**.

[**0050**] Referring to **FIG. 3**C, and in accordance with one embodiment of the invention, the user **120** can slide his or her finger **132** substantially tangentially from all sides of the touch pad **110**. For example, the touch pad **110** may be actuated forwards and backwards as shown by arrows **136** and side to side by arrows **138**.

[**0051**] **FIG. 4** is a block diagram of a touchpad/display system **200**, in accordance with one embodiment of the invention. By way of example, the touchpad/display system **200** may be used in the media player shown in **FIGS. 2 and 3**. The touchpad/display system **200** utilizes a touch pad **202** and a display screen **204**. The touchpad/display system **200** via the touch pad **202** is configured to transform a swirling or whirling motion **206** of an object such as a finger (as shown in **FIG. 3A**) into translational or linear motion **208** on the display screen **204**. In one embodiment, the touch pad **202** is arranged to continuously determine the angular position of an object relative to the planar surface **209** of the touch pad **202**. This allows a user to linearly scroll through a media list **211** on the display screen **204** by swirling the object at least partially around the touch pad **202**. For example, by moving the object between any angular positions (e.g., 0-360) on the touch pad **202**.

[**0052**] As shown, the touch pad **202** is divided into several independent and spatially distinct zones **210** that are positioned around the periphery of the touch pad **202**. Any number of zones may be used. In one embodiment, each of the zones **210** represents a polar angle that specifies the angular position of the zone in the plane of the touch pad **202**. By way of example, the zones **210** may be positioned at 2 degree increments all the way around the touch pad **202**. Each of the zones **210** has an associated sensor disposed therein for detecting the presence of an object such as a finger. The sensors may be widely varied. For example, the sensors may be based on resistive sensing, surface acoustic wave sensing, pressure sensing (e.g., strain gauge, pressure plates, piezoelectric transducers or the like), optical sensing, capacitive sensing and the like. In general, when an object approaches a zone **210**, and more particularly a sensor, a position signal is generated that informs the media system **200** that the object is at a specific angular position on the touch pad **202**. When an object is moved between zones **210** or over multiple zones **210**, multiple position signals are generated. These multiple position signals may be used to determine the angular location, direction, speed and acceleration of the object as its moved around the touch pad **202**.

[**0053**] The system **200** also includes a control assembly **212** that is coupled to the touch pad **202**. The control assembly **212** is configured to acquire the position signals from the sensors and to supply the acquired signals to a processor **214** of the system. By way of example, the control assembly **212** may include an application specific integrated circuit (ASIC) that is configured to monitor the signals from the sensors, to compute the angular location, direction, speed and acceleration of the monitored signals and to report this information to the processor **214**.

[**0054**] The processor **214** is coupled between the control assembly **212** and the display screen **204**. The processor **214** is configured to control motion inputs to the display screen **204**. In one sequence, the processor **214** receives angular motion information from the control assembly **212** and then determines the next items of the media list **211** that are to be presented on the display screen **204**. In making this determination, the processor **214** can take into consideration the length of the media list **211**. Typically, the processor **214** will determine the rate of movement of the finger such that the