

CLAIMS:

1. A headgear operation system comprising:
 - an accelerometer coupled to headgear and configured to detect an orientation of the headgear;
 - an actuator coupling an extending portion of the headgear to a main body of the headgear, wherein the actuator is configured to extend the extending portion away from the main body of the headgear and retract the extending portion toward the main body of the headgear; and
 - a controller communicatively coupled to the accelerometer and the actuator, wherein the controller comprises a processor and a memory, wherein the memory is configured to store machine-readable instructions, wherein the machine-readable instructions are configured to cause the processor to:
 - receive an indication of the orientation of the headgear from the accelerometer;
 - determine an instruction to send to the actuator based on the indication of the orientation of the headgear, wherein the instruction is configured to cause the actuator to extend the extending portion away from the main body of the headgear or retract the extending portion toward the main body of the headgear; and
 - send the instruction to the actuator.
2. The headgear operation system of claim 1, comprising a wireless receiver configured to receive a signal from a wireless transmitter of a second headgear.
3. The headgear operation system of claim 2, wherein the machine-readable instructions are configured to cause the processor to:
 - determine a second instruction to send to the actuator based on the signal, wherein the second instruction is configured to cause the actuator to extend the extending portion away from the main body of the headgear or retract the extending portion toward the main body of the headgear; and
 - send the second instruction to the actuator.

4. The headgear operation system of claim 2, comprising a second wireless transmitter, wherein the machine-readable instructions are configured to cause the processor to send a second signal to a second wireless receiver of the second headgear in response to receiving the signal at the wireless receiver.
5. The headgear operation system of claim 1, wherein the memory is configured to store a table that maps the indication of the orientation of the headgear to the instruction to send to the actuator, and wherein the machine-readable instructions that are configured to cause the processor to determine the instruction to send to the actuator comprise querying the table and receiving the instruction from the table.
6. The headgear operation system of claim 1, wherein the headgear comprises a helmet.
7. A headgear operation system comprising:
an accelerometer coupled to a headgear and configured to detect an orientation of the headgear;
a plurality of electronic displays coupled to the headgear, wherein the plurality of electronic displays is configured to display eyes; and
a controller communicatively coupled to the accelerometer and the plurality of electronic displays, wherein the controller comprises a processor and a memory, wherein the memory is configured to store machine-readable instructions, and wherein the machine-readable instructions are configured to cause the processor to:
receive an indication of the orientation of the headgear from the accelerometer;
determine an instruction to send to the plurality of electronic displays that causes the plurality of electronic displays to adjust display of the eyes based on the indication of the orientation of the headgear; and
send the instruction to the plurality of electronic displays.

8. The headgear operation system of claim 7, wherein the headgear comprises glasses or goggles.

9. The headgear operation system of claim 7, wherein the instruction causes the plurality of electronic displays to adjust display of the eyes by causing the eyes to appear to look in a direction, wink, or close.

10. The headgear operation system of claim 7, comprising a location sensor configured to determine a location of the headgear, wherein the controller is communicatively coupled to the location sensor, and wherein the machine-readable instructions are configured to cause the processor to send a second instruction to the plurality of electronic displays to display one or more images based on the location of the headgear.

11. The headgear operation system of claim 7, comprising a camera configured to capture an image, wherein the controller is communicatively coupled to the camera, and wherein the machine-readable instructions are configured to cause the processor to send a second instruction to the plurality of electronic displays to display one or more images based on image recognition information in the captured image.

12. The headgear operation system of claim 11, wherein the machine-readable instructions are configured to cause the processor to apply an image recognition process to determine the image recognition information in the captured image.

13. The headgear operation system of claim 7, comprising a microphone configured to capture sound or audio data, wherein the controller is communicatively coupled to the microphone, and wherein the machine-readable instructions are configured to cause the processor to send a second instruction to the plurality of electronic displays to display one or more images based on the captured sound or audio data.

14. The headgear operation system of claim 7, comprising a light sensor configured to detect a presence of light, wherein the controller is communicatively coupled to the light sensor, and wherein the machine-readable instructions are configured to cause the processor to send a second instruction to the plurality of electronic displays to display one or more images based on the presence of the light.

15. The headgear operation system of claim 14, wherein the light sensor is configured to detect a brightness level of the light, and wherein the machine-readable instructions are configured to cause the processor to send the second instruction to the plurality of electronic displays to display one or more images in response to determining that the brightness level of the light is above a threshold brightness level.

16. An interactive helmet comprising:

- a main body;

- a motion sensor configured to detect an orientation of the interactive helmet;

- a plurality of extending portions;

- a plurality of actuators, wherein each actuator of the plurality of actuators couples a respective extending portion of the plurality of extending portions to the main body of the interactive helmet, wherein each actuator of the plurality of actuators is configured to extend the respective extending portion away from the main body of the interactive helmet or retract the respective extending portion toward the main body of the interactive helmet; and

- a controller communicatively coupled to the motion sensor and the plurality of actuators, wherein the controller comprises a processor and a memory, wherein the memory is configured to store machine-readable instructions, and wherein the machine-readable instructions are configured to cause the processor to receive an indication of the orientation of the interactive helmet from the motion sensor, and cause an actuator of the plurality of actuators to extend an extending portion of the plurality of extending portions away from the main body of the interactive helmet or retract the extending portion toward the main body of the interactive helmet based on the orientation of the interactive helmet.

17. The interactive helmet of claim 16, wherein the motion sensor is configured to detect yaw, pitch, roll, or a combination thereof, of a movement of the interactive helmet, wherein the machine-readable instructions are configured to cause the processor to extend the extending portion away from the main body of the interactive helmet or retract the extending portion toward the main body of the interactive helmet based on the yaw, pitch, roll, or the combination thereof, of the movement of the interactive helmet.

18. The interactive helmet of claim 16, wherein the machine-readable instructions are configured to cause the processor to receive a first indication of a first orientation of the interactive helmet from the motion sensor, and cause a first actuator of the plurality of actuators to extend a first extending portion of the plurality of extending portions away from the main body of the interactive helmet and cause a second actuator of the plurality of actuators to retract a second extending portion of the plurality of extending portions toward the main body of the interactive helmet based on the first orientation of the interactive helmet.

19. The interactive helmet of claim 18, wherein the machine-readable instructions are configured to cause the processor to receive a second indication of a second orientation of the interactive helmet from the motion sensor, and cause the first actuator to retract the first extending portion toward the main body of the interactive helmet and cause the second actuator to extend the second extending portion away from the main body of the interactive helmet based on the second orientation of the interactive helmet.

20. The interactive helmet of claim 16, comprising a plurality of electronic displays coupled to the headgear, wherein the plurality of electronic displays is configured to display eyes, wherein the machine-readable instructions are configured to cause the processor to adjust display of the eyes based on the orientation of the headgear.