WHAT IS CLAIMED IS:

1. An endoscope comprising:

an endoscope housing;

one or more optical fibers disposed within the endoscope housing and configured to provide a path for propagation of a light beam;

a sealed fluid filled lens disposed in the endoscope housing and in the path of the light beam;

an actuator coupled to the sealed fluid filled lens and configured to change the optical power of the sealed fluid filled lens; and

a controller coupled to the actuator and configured to apply a signal to the actuator, wherein the signal instructs the actuator to change the optical power of the sealed fluid filled lens.

2. The endoscope of claim 1, further comprising a distance sensor configured to measure the distance between a distal end of the endoscope and an object disposed in front of the distal end of the endoscope.

3. The endoscope of claim 2, wherein the distance sensor uses IR wavelengths.

4. The endoscope of claim 2, wherein the distance sensor is an ultrasonic sensor.

5. The endoscope of claim 2, wherein the distance sensor uses visible light wavelengths.

6. The endoscope of claim 2, wherein the signal applied by the controller is based on a measurement received from the distance sensor.

7. The endoscope of claim 1, wherein the actuator is an electromechanical actuator.

8. The endoscope of claim 1, wherein the actuator varies a pressure applied to a liquid reservoir coupled to the sealed fluid filled lens.

9. The endoscope of claim 8, wherein the pressure applied changes the curvature of the sealed fluid filled lens.

10. The endoscope of claim 9, wherein the changes in curvature of the sealed fluid filled lens changes the magnification of the sealed fluid filled lens.

11. The endoscope of claim 10, wherein the magnification can be changed within the range of 2x to 5x.

12. The endoscope of claim 9, wherein the curvature has a minimum radius of curvature equal to 2.5 mm.

13. The endoscope of claim 1, wherein the endoscope housing comprises a hermetic window, and wherein the one or more optical fibers, the sealed fluid filled lens, and the actuator are disposed within the hermetic window.

14. The endoscope of claim 1, wherein the housing further comprises a slider configured to move the one or more optical fibers, the sealed fluid filled lens, and the actuator along a length of the housing.

15. The endoscope of claim 1, wherein the sealed fluid filled lens includes a fixed concave lens and a flexible membrane.

16. A method comprising:

receiving a signal from a distance sensor, wherein the signal is associated with a distance between a distal end of an endoscope and an object disposed in front of the distal end of the endoscope;

comparing the signal to an optical power associated with one or more sealed fluid filled lenses and to a requested magnification; and

adjusting at least one of the optical power of the one or more sealed fluid filled lenses and the distance based on the comparing.

17. The method of claim 16, wherein the receiving is performed continuously.

18. The method of claim 17, wherein the receiving comprises continuously receiving an optical signal.

19. The method of claim 17, wherein the receiving comprises continuously receiving an acoustic signal.

20. The method of claim 16, wherein the comparing further compares the signal to the radius of curvature of the one or more sealed fluid filled lenses.

21. The method of claim 16, wherein the adjusting the optical power comprises adjusting the curvature of the one or more sealed fluid filled lenses.

22. The method of claim 21, wherein the adjusting the curvature is performed by one or more electromechanical actuators.

23. The method of 22, wherein one or more pressures applied to one or more liquid reservoirs coupled to the one or more sealed fluid filled lenses are varied by the electromechanical actuators.

WHAT IS CLAIMED IS:

1. An invention not claimed in any divisional application.