

What is Claimed:

1. Eyewear comprising:
a frame; and
an electronic docking station,
wherein the docking station is configured to provide power to a docked electrical component.
2. The eyewear of claim 1, wherein an electrical component docked into the docking station further provides audio.
3. The eyewear of claim 1, wherein an electrical component docked into the docking station further provides video.
4. The eyewear of claim 1, wherein an electrical component docked into the docking station further provides a power source.
5. The eyewear of claim 1, wherein the docking station is configured to connect with a power charger.
6. The eyewear of claim 1, wherein the docked electrical device is configured to connect with a power charger.
7. The eyewear of claim 1, wherein the docking station is located on the frame.
8. The eyewear of claim 1, wherein the docking station is located on a temple of the frame.
9. The eyewear of claim 1, wherein the electrical component comprises a transceiver.
10. The eyewear of claim 1, wherein the electrical component comprises a MP3 player.

11. The eyewear of claim 1, wherein the electrical component comprises a radio.
12. The eyewear of claim 1, wherein the electrical component comprises a cell phone.
13. The eyewear of claim 1, wherein the electrical component comprises a video player.
14. The eyewear of claim 1, wherein the electrical component comprises a camera.
15. The eyewear of claim 1, further comprising a light.
16. The eyewear of claim 15, wherein the light is an LED.
17. The eyewear of claim 1, further comprising a lens, wherein the lens is at least one of: conventional, electro-active, electro-chromic, electro-fluid, electro-mechanical, and optically variable.
18. The eyewear of claim 2, wherein the audio is provided to the wearer by way of an earbud.
19. The eyewear of claim 18, wherein the earbud is affixed to audio cable and wherein the audio cable is contained within on a spring loaded spool.
20. The eyewear of claim 1, further comprising a heads up display.
21. The eyewear of claim 20, wherein the heads up display is a partial VGA.
22. The eyewear of claim 20, wherein the heads up display is a full VGA.
23. The eyewear of claim 20, wherein the heads up display is monocular.
24. The eyewear of claim 20, wherein the heads up display is binocular.

25. The eyewear of claim 1, wherein the electrical component is controlled by a remote controller.
26. The eyewear of claim 22, wherein the remote controller comprises a display.
27. The eyewear of claim 1, wherein the eyewear separates at the bridge.
28. The eyewear of claim 1, wherein the eyewear includes mono audio.
29. The eyewear of claim 1, wherein the eyewear includes stereo audio.
30. The eyewear of claim 1, wherein the electrical power provided the electrical component is provided by way a power means of the docked electrical component and also from that of the eyewear.
31. The eyewear of claim 1, wherein the eyewear further comprises a tether, and wherein the tether can comprise a power means.
32. The eyewear of claim 1, wherein the eyewear comprises a video file player.
33. The eyewear of claim 1, wherein the docking station comprises a female receptacle.
34. The eyewear of claim 1, wherein the electrical component comprises a male electrical prong.
35. The eyewear of claim 1, wherein the electrical component comprises a male electrical pin.
36. Eyewear comprising:
a frame; and
a camera connected with the frame,
wherein the camera is configured to be controlled by a remote controller.

37. The eyewear of claim 36, wherein the camera is configured to capture video.
38. The eyewear of claim 36, wherein the camera is configured to capture a photo.
39. The eyewear of claim 36, wherein the camera is connected to data storage.
40. The eyewear of claim 36, further comprising a wrist watch configured to act both as a time piece and a controller of the camera.
41. The eyewear of claim 36, wherein the camera is located in front of the frame.
42. The eyewear of claim 36, further comprising a lens, wherein the camera is located in front of the lens.
43. The eyewear of claim 36, wherein the camera is removably attached to the eyewear.
44. The eyewear of claim 36, wherein the camera includes a clip configured to be affixed to the eyewear.
45. The eyewear of claim 36, further comprising a heads up display.
46. The eyewear of claim 45, wherein the heads up display is a partial VGA.
47. The eyewear of claim 45, wherein the heads up display is a full VGA.
48. The eyewear of claim 45, wherein the heads up display is monocular.
49. The eyewear of claim 45, wherein the heads up display is binocular.
50. The eyewear of claim 36, further comprising a light.

51. The eyewear of claim 50, wherein the light is an LED.
52. The eyewear of claim 36, further comprising the remote controller, wherein the remote controller comprises a display.
53. The eyewear of claim 36, further comprising the remote controller, wherein the remote controller is a wrist watch.
54. The eyewear of claim 36, wherein the eyewear is configured to separate at a bridge of the eyewear.
55. The eyewear of claim 36, wherein the eyewear includes mono audio.
56. The eyewear of claim 36, wherein the eyewear includes stereo audio.
57. The eyewear of claim 36, further comprising a lens, wherein the lens is at least one of: conventional, electro-active, electro-chromic, electro-fluid, electro-mechanical, and optically variable.
58. The eyewear of claim 36, further comprising an earbud.
59. The eyewear of claim 58, wherein the earbud is affixed to audio cable and wherein the audio cable is contained within on a spring loaded spool.
60. The eyewear of claim 36, further comprising a video file player.
61. The eyewear of claim 36, further comprising a tether, wherein the tether includes a power means.
62. Eyewear comprising:

a frame;
a visor attached to the frame; and
a heads up display,
wherein the heads up display is housed in the visor.

63. The eyewear of claim 62, wherein said visor is configured to be positioned in multiple positions relative to the pupil of the wearer's eye.

64. The eyewear of claim 62, wherein said visor is configured to be adjustably positioned so that the heads up display may be transitioned between positions within the line of sight of the wearer and out of the line of sight of the wearer.

65. The eyewear of claim 62, wherein the heads up display is a partial VGA.

66. The eyewear of claim 62, wherein the heads up display is a full VGA.

67. The eyewear of claim 62, further comprising a light.

68. The eyewear of claim 67, wherein the light is an LED.

69. The eyewear of claim 62, wherein the heads up display is configured to be controlled by a remote controller.

70. The eyewear of claim 69, wherein the remote controller comprises a display.

71. The eyewear of claim 69, wherein the remote controller is a wrist watch.

72. The eyewear of claim 62, wherein the eyewear is configured to separate at a bridge of the eyewear.

73. The eyewear of claim 62, wherein the heads up display is monocular.

74. The eyewear of claim 62, wherein the heads up display is binocular.
75. The eyewear of claim 62, wherein the eyewear includes mono audio.
76. The eyewear of claim 62, wherein the eyewear includes stereo audio.
77. The eyewear of claim 62, further comprising a lens, wherein the lens is at least one of: conventional, electro-active, electro-chromic, electro-fluid, electro-mechanical, and optically variable.
78. The eyewear of claim 62, wherein the eyewear comprises an earbud.
79. The eyewear of claim 78, wherein the earbud is affixed to audio cable and the audio cable is loaded on a spring loaded spool.
80. The eyewear of claim 62, further comprising a video file player.
81. The eyewear of claim 62, further comprising a tether, wherein the tether includes a power means.

What is Claimed:

1. An intra-ocular lens system, comprising:
 - an intra-ocular lens to provide a fixed refractive power;
 - an electro-active lens element, in optical communication with the intra-ocular lens, to provide a variable optical power;
 - an electrical power source, in electrical communication with the electro-active element, to supply electrical power to the electro-active element; and
 - a piezoelectric element, in electrical communication with the electrical power source via a plurality of charging leads, to generate charge in response to mechanical forces applied by a ciliary body of an eye when the intraocular system is implanted in the eye.
2. The intra-ocular lens system of Claim 1, further comprising:
 - a controller, operably coupled to the electrical power source and the energy storage element, to control electrical power applied to said electro-active lens element using a switching mechanism.
3. The intra-ocular lens system of Claim 1, wherein said electrical power source comprises a rechargeable battery or a charge storage capacitor.
4. The intra-ocular lens system of Claim 2, wherein said switching mechanism comprises a tilt switch or a range finder.
5. The intra-ocular lens system of Claim 2, wherein said switching mechanism uses a triangulation based on at least one of the direction of both eyes, forces exerted on the intra-ocular lens system by the lens muscles, and contractions of the ciliary muscle.
6. The intra-ocular lens system of Claim 2, wherein said switching mechanism is configured to be remotely controlled.

7. The intra-ocular lens system of Claim 1, wherein said electro-active lens element comprises a diffractive electro-active lens element.
8. The intra-ocular lens system of Claim 7, wherein said diffractive electro-active lens element comprises a pixelated region, a surface relief diffractive pattern or multiple independently controllable zones.
9. The intra-ocular lens system of Claim 1, wherein said electro-active lens element provides optical power in a range of from approximately zero diopter to approximately +2.50 diopter, a range of from approximately zero diopter to approximately +2.75 diopter, a range of from approximately zero diopter to approximately +3.00 diopter or a range of from approximately zero diopter to approximately +3.25 diopter.
10. The intra-ocular lens system of Claim 9, wherein said electro-active lens element comprises at least two electro-active layers, wherein each of said electro-active layers provides at least an additive portion of optical power.
11. The intra-ocular lens system of Claim 1, wherein said electrical power source is located peripheral to said diffractive electro-active lens element.
12. The intra-ocular lens system of Claim 1, wherein said electrical power source is configured in a mostly circular manner.
13. The intra-ocular lens system of Claim 2, wherein said electrical power source comprises a battery or a capacitor.
14. The intra-ocular lens system of Claim 2, wherein said electrical power source is configured to be remotely charged by induction, by a pillow comprising an induction coil, by a laser, by a solar cell or via a pair of eyeglasses.
15. The intra-ocular lens system of Claim 1, wherein said intra-ocular lens comprises at least two layers configured to provide a prismatic shift.

16. The intra-ocular lens system of Claim 15, wherein said prismatic shift is configured to be altered remotely.
17. The intra-ocular lens system of Claim 15, wherein said prismatic shift produces a shift in focus location within a range of from approximately 0.1 mm to approximately 3.0 mm.
18. The intra-ocular lens system of Claim 1, wherein said lens system is adapted for correcting a higher order aberration.
19. The intra-ocular lens system of Claim 18, wherein said higher order aberration correction is at least partially provided by said electro-active lens element.
20. The intra-ocular lens system of Claim 18, wherein said higher order aberration correction is adapted for being tuned remotely.
21. The intra-ocular lens system of Claim 1, wherein said lens system is adapted for providing a changeable tint.
22. The intra-ocular lens system of Claim 21, wherein said changeable tint comprises a sunglass tint.
23. The intra-ocular lens system of Claim 21, wherein said changeable tint is adapted for changing automatically in response to a signal from a light sensor.
24. The intra-ocular lens system of Claim 21, wherein said changeable tint is provided by said electroactive lens element.
25. The intra-ocular lens system of Claim 1, wherein said electro-active lens element comprises a bi-stable liquid crystal, a nematic liquid crystal, a cholesteric liquid crystal or a ferro-electric liquid crystal.
26. The intra-ocular lens system of Claim 1, wherein said intra-ocular lens system is adapted for being folded.

27. The intra-ocular lens system of Claim 1, wherein said intra-ocular lens system comprises acrylic or silicone.
28. The intra-ocular lens system of Claim 1, wherein said intra-ocular lens system is adapted for providing multiple focal points or for providing an adjustable aperture.
29. The intra-ocular lens system of Claim 1, wherein said intra-ocular lens system is adapted to be used as a corneal inlay.
30. The intra-ocular lens system of Claim 2, wherein said controller is adapted for being remotely programmed.
31. The intra-ocular lens system of Claim 1, wherein said intra-ocular lens system is adapted for having its optical power remotely tuned.
32. The intra-ocular lens system of Claim 1, further comprising an antenna.
33. The intra-ocular lens system of Claim 1, further comprising a control chip.
34. The intra-ocular lens system of Claim 33, wherein said control chip is adapted for receiving at least one of wireless communication, radio wave communication, light wave communication, and radio frequency energy.
35. The intra-ocular lens system of Claim 1, wherein said intra-ocular lens system provides a tint and wherein said intra-ocular lens system is adapted for having said tint remotely tuned.
36. The intra-ocular lens system of Claim 1, wherein said lens system provides a prismatic optical power and wherein said lens system is adapted for having said prismatic optical power remotely tuned.
37. The intra-ocular lens system of Claim 1, wherein said intra-ocular lens encapsulates said electro-active lens element.

38. The intra-ocular lens system of Claim 1, wherein said electro-active lens element is sealed.
39. The intra-ocular lens system of Claim 1, wherein the piezoelectric element comprises a piezoelectric film.
40. The intra-ocular lens system of Claim 1, wherein said electro-active lens element is an accommodative intraocular lens.
41. The intra-ocular lens system of Claim 1, wherein said intra-ocular lens and said electroactive lens element are independently operable.
42. The intra-ocular lens system of Claim 1, further comprising an antenna, and wherein said electro-active lens element is adapted for being tuned remotely using wireless communication via the antenna.
43. The intra-ocular lens system of Claim 1, further comprising:
at least one ciliary attachment tab, attached to the piezoelectric element, to attach the piezoelectric element to the ciliary body when the intra-ocular lens system is implanted in the eye.
44. The intra-ocular lens system of Claim 1, further comprising:
a processor, operably coupled to the piezoelectric element and the electro-active element, to sense a contraction of the ciliary body and to actuate the electro-active element in response to the contraction of the ciliary body.
45. The intra-ocular lens system of Claim 1, further comprising:
at least one anchor, coupled to the intra-ocular lens, to anchor the intraocular system within the eye.
46. An intraocular system comprising:
a flexible base intraocular element configured to provide a fixed base refractive power;

an electro-active element in optical communication with the flexible base intraocular element, the electro-active element comprising multiple independently controllable zones or pixels;

an energy storage element, positioned adjacent to the electro-active element, to supply electrical power to the electro-active element;

a charging arrangement, in electrical communication with the energy storage element, comprising a piezo-electric element configured to selectively supply electrical power to the energy storage element so as to at least partially recharge the energy storage element; and

a plurality of charging leads, in electrical communication with the energy storage element and the piezo-electric element, to transfer the electrical power from the piezo-electric element to the energy storage element,

wherein the electro-active element is configured to be folded before insertion to the eye, and unfolded after insertion to the eye.

47. An intraocular system according to claim 46, wherein the energy storage element comprises at least one of the set consisting of a battery and a capacitor.

48. An intraocular system according to claim 46, further comprising:

at least one ciliary attachment tab, coupled to the piezo-electric element, to attach the piezo-electric element to a ciliary body of the eye for generation of the electrical power in response to movement of the ciliary body.

49. An intraocular system according to claim 46, further comprising:

at least one anchor, attached to the electro-active element, to position the intraocular element within a membrane of the eye.

50. An intraocular system according to claim 46, wherein the flexible base intraocular element comprises at least one of an acrylic or a solid silicone.

51. An intraocular system according to claim 46, wherein the flexible base intraocular element is foldable.

52. An intraocular system according to claim 46 wherein the electroactive element is configured to correct distance vision.
53. An intraocular system according to claim 46 wherein the electro-active element provides one of 2.5 Diopters, 2.75 Diopters, 3.0 Diopters or 3.25 Diopters of optical power.
54. An intraocular system according to claim 46 wherein the flexible base intraocular element is configured to provide optical power normally provided by a healthy crystalline lens.
55. An intraocular system according to claim 46 wherein the flexible base intraocular element provides about 17 Diopters of optical power.
56. An intraocular system according to claim 46 wherein the electro-active element is configured to provide a reduction of up to about 90 percent in the amount of light transmitted through the intraocular system.
57. An intraocular system according to claim 46, wherein the electro-active element includes a plurality of pixels that are configured to provide a prismatic shift.
58. An intraocular system according to claim 57, wherein the electro-active element is remotely tuneable to adjust the prismatic shift to at least one of a user's anatomy and ocular condition.
59. An intraocular system according to claim 46, wherein the electro-active element includes two-dimensional array of pixels.