28. The touch sensor according to claim 1, wherein said at least two distinct sets of waves include a higher order horizontally polarized shear wave.

29. The touch sensor according to claim 1, further comprising a reflective boundary for reflecting sets of acoustic waves.

30. The touch sensor according to claim 1, wherein said at least two distinct sets of waves comprise at least three distinct sets of waves.

31. The touch sensor according to claim 1, wherein said at least two distinct sets of waves have differing axes of propagation, said receiver system comprising at least two transducers, each receiving a portion of said at least two waves.

32. The touch sensor according to claim 1, wherein said at least two distinct sets of waves have differing axes of propagation, said transducer system comprising at least two transducers, each emitting a portion of said at least two sets of waves.

33. The touch sensor according to claim 1, wherein said at least two distinct sets of waves propagate simultaneously in said touch sensitive region.

34. The touch sensor according to claim 1, wherein said at least two distinct sets of waves do not propagate simultaneously in said touch sensitive region.

35. The touch sensor according to claim 1, wherein said receiver system is sensitive to waveform information of said received signals.

36. The touch sensor according to claim 1, wherein said receiver system is phase sensitive to said received signals.

37. The touch sensor according to claim 1, wherein portions of said at least two distinct sets of waves share are incident on a single receiving transducer simultaneously.

38. The touch sensor according to claim 1, further comprising means for determining the characteristic of the touch based on a pattern of perturbation of the received signal corresponding to a superposed wave consisting of portions of each of said at least two distinct sets of waves.

39. The touch sensor according to claim 1, further comprising means for recognizing perturbations in components of said received signal derived from each of said at least two distinct sets of waves.

40. The touch sensor according to claim 1, wherein said surface is planar.

41. The touch sensor according to claim 1, wherein said surface is cylindrical.

42. The touch sensor according to claim 1, wherein said surface is a large solid angle spheric section.

43. The touch sensor according to claim 1, wherein said at least two distinct sets of waves travel over differing paths, said receiver system determining a position of a perturbing influence and producing an output including a coordinate position, at least one of said coordinates of said coordinate position being calculated based on a transform of signals representing at least one of said sets of waves.

44. A touch sensor comprising:

an acoustic wave transmissive medium having a surface and a touch sensitive portion of said surface;

a transducer system for emitting acoustic energy into said substrate; and

a receiver system for receiving acoustic energy from said substrate,

said receiver system analyzing a perturbation of said received acoustic energy in waveform sensitive manner.

45. The touch sensor according to claim 44, further comprising a filter for selectively analyzing received acoustic energy signals corresponding to acoustic energy traveling a predetermined path from said transducer system.

46. The touch sensor according to claim 44, wherein said receiver system analyzes a phase pattern of said acoustic energy from said substrate for determining a position or a characteristic of a touch on said touch sensitive portion.

47. A touch sensor comprising:

an acoustic wave transmissive medium having a surface, an edge, and a touch sensitive portion of said surface medial to said edge;

a transducer system for emitting acoustic energy onto said touch sensitive portion as waves traveling along a plurality of sets of paths;

a receiver system for receiving acoustic energy from said touch sensitive portion from said plurality of sets of paths,

said plurality of sets of paths having at least two components propagating along a path intersecting a respective position along said edge, differing in propagation angle with respect to said edge.

48. The touch sensor according to claim 47, further comprising means for determining a position or a waveform perturbing characteristic of a touch on said touch sensitive portion based on at least two of said plurality of sets of paths.

49. A touch sensor comprising:

an acoustic wave transmissive medium having a surface and a touch sensitive portion of said surface;

a transducer system for emitting acoustic energy into said medium; and

a receiver system for receiving the acoustic energy from the substrate as at least three distinct sets of waves which propagate in the touch sensitive portion;

said receiver determining a position or a waveform perturbing characteristic of a touch on said touch sensitive portion based on said at least three sets of waves.

50. A control for determining a position of a touch on a surface by means of sets of acoustic waves having incrementally varying paths, portions of at least two of said sets of waves being received simultaneously at an electroacoustic transducer, comprising a phase sensitive circuit, retaining phase information of said portions of at least two of said sets of waves.

51. A control for determining a position of a touch on a surface by means of sets of acoustic waves having incrementally varying paths, portions of at least two of said sets of waves being perturbed by a touch, comprising a transform processor for producing an output representative of a position along a single axis based on information derived from each of said sets of waves.

52. A control for determining a position of a touch on a surface by means of sets of acoustic waves having incrementally varying paths, portions of at least two of said sets of waves being perturbed by a touch, comprising a processor for determining a positional consistency of information derived from each of said sets of waves.