What is claimed is:

1. An apparatus comprising:

a first optical coupling section coupling at least one input/output port to a first end of at least two optical communication paths having different effective lengths; and,

a second optical coupling section coupling at least one output/input port to a second end of said at least two optical communication paths, wherein said at least one output/input port is coupled optically to at least one of said at least one output/input ports.

2. The apparatus of claim 1, wherein said at least one output/input port includes a first output/input port and a second output/input port, wherein said first output/input port and said second output/input port are coupled optically.

3. The apparatus of claim 2, wherein said first output/input port and said second output/input port are coupled optically through at least one of an optical isolator and an optical circulator.

4. The apparatus of claim 1, wherein said at least one output/input port is coupled to a reflective element.

5. The apparatus of claim 4, wherein said reflective element is configured to reflect at least a portion of an optical signal passing from said second coupling section through said output/input port back through said output/input port and said second coupling section.

6. The apparatus of claim 4, wherein said apparatus includes an optical circulator optically coupled to said input/output port.

7. The apparatus of claim 4, wherein said reflective element includes at least one of a wavelength selective reflective element and a non-wavelength selective reflective element.

8. The apparatus of claim 4, wherein said reflective element includes at least one Bragg grating.

9. The apparatus of claim 8, wherein apparatus includes a tuning element cooperating with at least one of said Bragg gratings.

10. The apparatus of claim 4, wherein said reflective element includes at least one mirror.

11. The apparatus of claim 1, wherein said apparatus includes an optical circulator optically coupled to said input/output port.

12. The apparatus of claim 1, wherein said apparatus includes a tuning element positioned proximate at least one of said optical communication paths.

13. The apparatus of claim 1, wherein said apparatus includes a tuning element positioned proximate at least one of said optical communication paths.

14. The apparatus of claim 13, wherein said apparatus includes a filter controller configured to control said tuning element in response to a monitoring signal.

15. The apparatus of claim 1, wherein said apparatus includes at least one intermediate coupling section between said first and second coupling sections, wherein said optical communication paths are coupled through said intermediate coupling to provide at least one path length difference between said communication paths.

16. The apparatus of claim 15, wherein a path length difference between said communication paths is provided between said first coupling section and said intermediate coupling section and between said intermediate coupling section and said second coupling section.

17. The apparatus of claim 15, wherein said apparatus includes a plurality of intermediate coupling sections.

18. The apparatus of claim 1, wherein said communication paths having different physical lengths.

19. A method of filtering optical signals comprising:

providing a Mach-Zehnder interferometer having at least one input/output port and at least one output/input port;

introducing an optical signal into the at least one input/output port to provide a single pass output from the at least output/input port; and,

introducing the single pass output into at least one of the output/input port to provide a double pass output from at least one of the input/output ports.

20. The method of claim 19, wherein said introducing includes introducing only one of the single pass outputs from the at least one of the output/input port back into one of the input/output ports.

21. An optical system comprising:

at least one transmitter;

at least one receiver; and,

an optical filter including a first optical coupling section coupling at least one input/output port to a first end of at least two optical communication paths having different lengths, and

a second optical coupling section coupling at least one output/input port to a second end of said at least two optical communication paths, wherein said at least one output/input port is coupled to at least one of said at least one output/input ports.

22. The system of claim 21, wherein said system includes at least one of an optical amplifier, optical switch, optical add/drop multiplexer, and interfacial device.

23. The system of claim 21, wherein said system includes:

a plurality of optical transmitters; and,

a plurality of optical receivers.

24. The system of claim 21, wherein said system includes at least one of an optical combiner and optical distributor.

25. The system of claim 21, wherein said system is a reconfigurable optical network.

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