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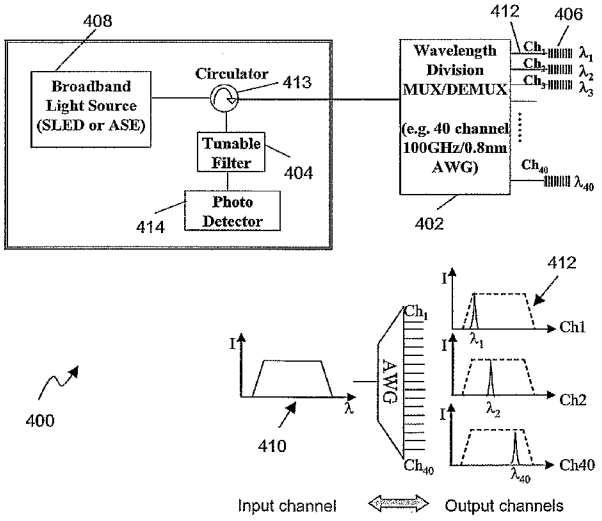
(54) Title: WDM-BASED SENSOR SYSTEM AND SENSOR INTERROGATION SYSTEM



(57) Abstract: A WDM based sensor system, a method of interrogating a plurality of sensor elements, and a WDM based sensor interrogation system. The WDM based sensor system comprises a WDM MUX/DEMUX element for demultiplexing an optical input signal into a plurality of substantially non-overlapping signals in respective sensing channels; one or more sensor elements disposed in each sensing channel; wherein the MUX/DEMUX element multiplexes sensing signals from the respective sensing channels into an optical return signal; and a detector element for detecting the sensing signals in the multiplexed optical return signal.

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