## SUMMARY

**[0008]** Systems, methods, and products to address these and other needs are described herein with respect to illustrative, non-limiting, implementations. Various alternatives, modifications and equivalents are possible.

**[0009]** An embodiment of a system with a minute measure of pulsatility in a flow of a fluid is described that comprises a first pump configured to flow the fluid to a junction at a first flow rate that comprises a measure of pulsatility; and a second pump configured to flow a portion of the fluid from the junction at a second flow rate that is less than the first flow rate to produce a flow of the fluid at a third flow rate from the junction with a minute measure of pulsatility.

Another embodiment provides a method for providing a fluid flow with a minute measure of pulsatility, comprising flowing a fluid to a junction at a first flow rate that comprises a measure of pulsatility; and flowing a portion of the fluid from the junction at a second flow rate that is less than the first flow rate to produce a third flow rate of the fluid from the junction with a minute measure of pulsatility.

**[0010]** The above embodiments and implementations are not necessarily inclusive or exclusive of each other and may be combined in any manner that is non-conflicting and otherwise possible, whether they are presented in association with a same, or a different, embodiment or implementation. The description of one embodiment or implementation is not intended to be limiting with respect to other embodiments and/or implementations. Also, any one or more function, step, operation, or technique described elsewhere in this specification may, in alternative implementations, be combined with any one or more function, step, operation, or technique described in the summary. Thus, the above embodiment and implementations are illustrative rather than limiting.

## BRIEF DESCRIPTION OF THE DRAWINGS

**[0011]** The above and further features will be more clearly appreciated from the following detailed description when taken in conjunction with the accompanying drawings. In the drawings, like reference numerals indicate like structures, elements, or method steps and the leftmost digit of a reference numeral indicates the number of the figure in which the references element first appears (for example, element 120 appears first in FIG. 1 ). All of these conventions, however, are intended to be typical or illustrative, rather than limiting.