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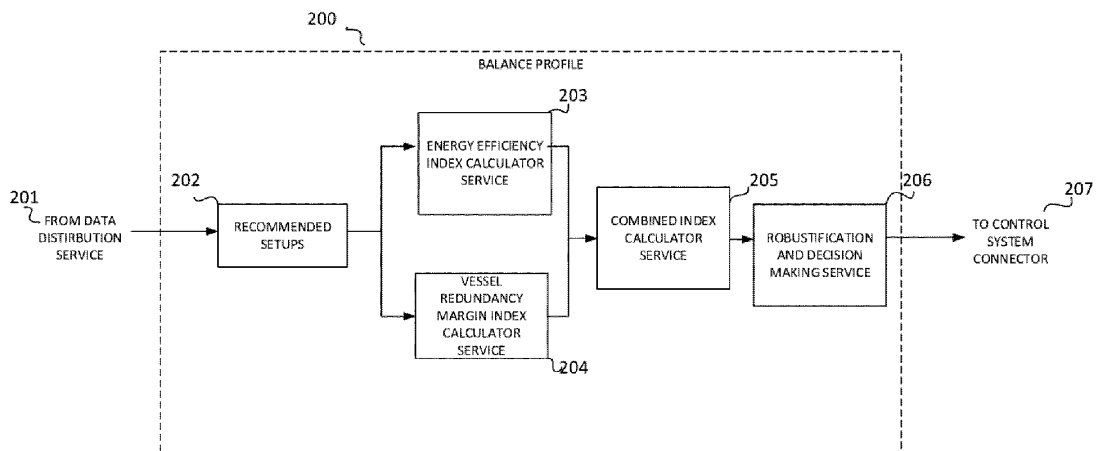


Fig. 2

(57) **Abstract:** System for controlling a marine vessel comprising a number of devices, the devices including a number of power generators and consumers, further comprising sensors for monitoring the activity of the devices. The system including at least one processor calculating device score values of the devices and a control unit connected to said devices and being configured to calculate an efficiency score value based on said device score values. The efficiency score value defining the efficiency of the system. The system also calculates the redundancy of the system based on the operation mode and/or load of the devices, and a redundancy margin index indicating the redundancy of the system devices, according to predetermined scores for each operation mode and computing the efficiency and redundancy values.

[Continued on next page]

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