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Fault-Tolerant Time-out Communication Protocol

Innovative software controls microflow sensor networks to quickly identify flow problems, ensuring accurate, prompt operator notification for reliable monitoring and control.

Current single sensor flow systems are large and cannot measure multiple variables nor guarantee the delivery of accurate information all of the time. On the other hand, sensor arrays, particularly microflow sensors, have costs, such as scaling problems, lack of proper development, and faults that make them less desirable. A large part of this problem is also due to the lack of a proper communication system that allows for efficient use of system resources among the sensors.

Purdue University researchers have developed a technology that implements innovative software that controls microflow sensor networks to solve the reliability issues and improve placement flexibility. The sensors are grouped in a way to provide immediate response to flow problems in less time. The software that controls these sensors ensures that the flow network operator is notified accurately and promptly to provide an immediate response that will not delay production or testing decisions.

Advantages:

-Set up is easily understood and simple to implement

-Faster response to flow problems

-More reliable monitoring and control

Potential Applications:

-Network software

-Computer technology

TRL: 6

Technology ID
62028

Category
Robotics & Automation/Perception & Sensing
Robotics & Automation/Automation & Control

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