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Smart watch and control in accelerator control system

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The controls system at Brookhaven National Laboratory's RHIC complex contains millions of control points. Many of these produce alarms when a fault condition is present. The severity of alarms often depends on a combination of factors within the Controls system. To provide Operations with condition-specific alarms, it is sometimes necessary to monitor and evaluate multiple control points simultaneously. A server/client-based software architecture was developed which monitors multiple control points, and dynamically generates appropriate alarms based on user-defined programmatic relationships. The user interface tools are provided which allow Operations staff to create, update, enable, and disable conditions for any specific case on the fly. The flexibility of the system can help Operations to simplify diagnostics during some complex failure situations.

Footnotes

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