PSA
PROFESSIONAL SOFTWARE ASSOCIATES, INC.

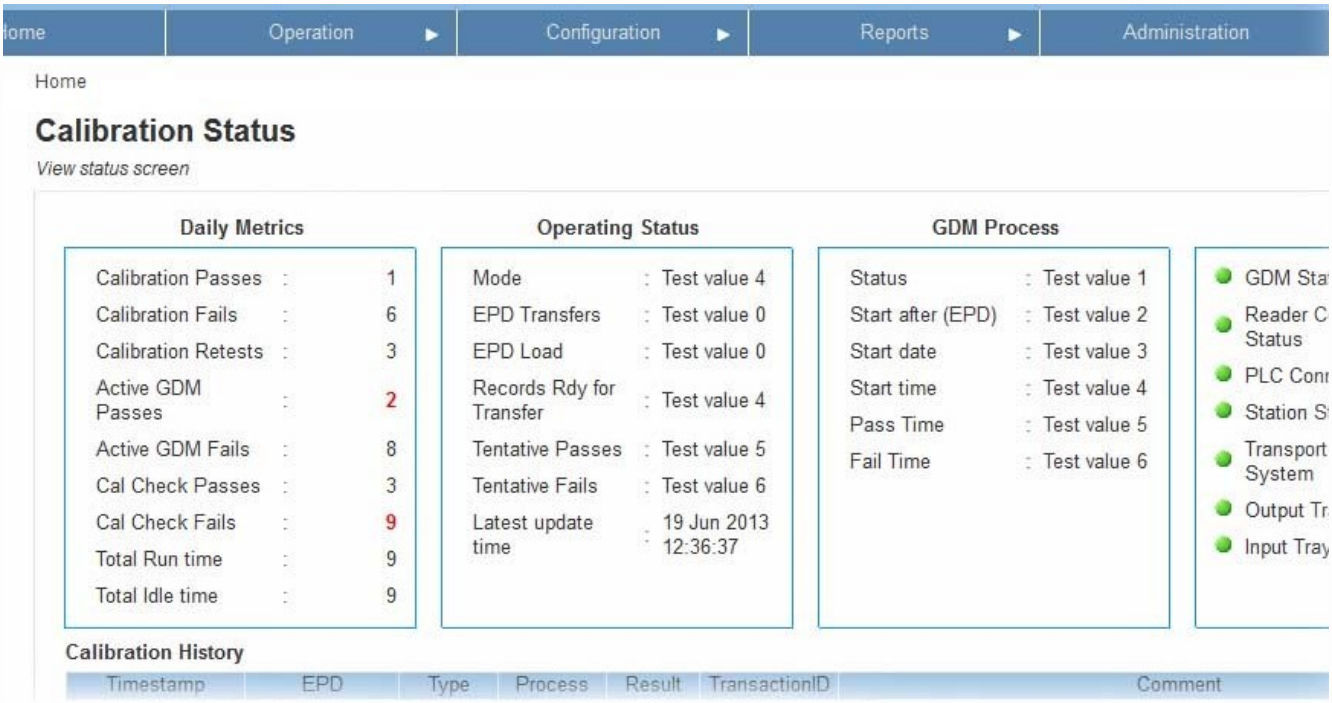
DOSIMETER CALIBRATION MANAGEMENT TOOL

Datasheet

PROVIDING SOLUTIONS FOR TOMORROW – SINCE 1993

Project objective

Develop software for a machine used to calibrate the personal electronic hand-held dosimeters, wich would allow for remote monitoring of the process, configuration of the calibration process in a step-by-step manner, report generation and the exporting of calibration results. The app would run on a dedicated PC and interact with the calibration bench and personal dosimeters undergoing irradiation calibration in the Source Exposure Module.



Result

The delivered desktop and web tools allow for a comprehensive control of the augmented calibrating machine. In real-time, the application collects and sends data to dosimeters under calibration, the transportation system of the calibrating machine, and the irradiation source module. The threshold and sensitivity of the various types of client-produced dosimeters are set in adherence with the instructions of the control app.

The delivered features together with a responsive UI contributed to the ultimate performance and throughput of the system. The client receives calibration verification, analysis, and reporting for every produced dosimeter, which helps verify the devices beforesale. The high accuracy of calibration allows for the usage of personal handheld dosimeters for scientific, industrial, medical, and other purposes

Scope of work

- Implemetation of radiation dose management for the particular types of dosimeter; open/close status for exposure source
- Establishment of position for dosimeters, and their moving between irradiation stations at the required direction
- Ability for changing dosimeters' settings in accordance with their response to exposure
- Provision of secure automatic data export to the centralized production management system, and delivery of calibration reports
- Ability to view history of dosimeters calibration configuration, process, and results
- Implementation of multi-tasking for the updated calibrating machine, which allows for simultaneous irradiation of several dosimeters

Activities

- Requirements definition
- Architecture design
- Software development
- Algorithms implementation
- GUI development
- Functional testing
- Integration & site acceptance testing
- User and maintenance guide creation

About the project

Technologies

- .NET
- ASP.NET MVC
- C#
- MS SQL
- MS Reporting Service

Project size

- 2.5 people

Duration

19
months

Platform

- Web
- Desktop