Medical Network Recorder

Project Example

Customer

A German international leader in medical device manufacturing experienced two issues with their existing network recorder.

A. Obsolescence of key components of the recorder
B. A lack of in-house capacity to develop a future- proof solution.

This is where AimValley stepped in to develop a turnkey, medical-grade replacement.

Customer Objectives

This customer has a thermal strip chart recorder in their portfolio, that provides documentation of stored events, alarms, waveforms, and trends. The recorder also provides print functions to various patient monitoring systems.

However, due to various manufacturing reasons the current recorder cannot be produced anymore, leaving the customer in a critical situation.
The strip chart recorder remains a key feature in their integral solutions. Our customer, therefore, decided to design a replacement product.

The behavior of the replacement device needed to be the same as the old, and more importantly be compatible with the existing patient monitoring systems. These systems are all interconnected and make use of a proprietary network solution.

Customer Benefits

- Future-proof solutions
- Ability to continue the network recording functionality in the existing hospital environment.

AimValley Solution

The existing recorder was used to derive technical specifications. This meant a significant portion of the work was reverse engineering of the current product and the ecosystem it is supposed to operate in.
The outcome of this reverse engineering was used to define the technical system requirements, the system architecture and software architecture.

AimValley took responsibility for the definition, design and realization phases of the project, covering the system, the subsystem development as well as the System verification phase
From systems engineering, electronics and mechanical engineering, to software development and system verification & test, our experts worked as one team.

Turnkey product development is what we do best!

The entire development was executed in our customer's Quality Management System and Processes.

Key Deliverables

> Reverse Engineering Documentation
> Technical System Requirements
> Architecture documentation: system & software
> Detailed design documentation
> Implementation and realization of software, electronics and mechanical parts
> Testing: unit testing, integration testing and SVT
> Various Traceability Documents
> Pre-production Models
> Integration and Support into customer product.
> Documentation for architecture, design, and test report.

Design Briefs & Technologies

> Turnkey Product Development Process

AimValley
Utrechtseweg 38
1213 TV Hilversum
The Netherlands
phone +31 35 689 1900
sales@aimvalley.com
www.aimvalley.com

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Results and Added Value

Efficient
AimValley's turnkey development process includes all design disciplines with the correct skill set, under one roof.

Successful
During all our designs we strive for optimization of an existing situation. In this case we identified areas for improvement in the factory process, creating a more efficient way of product assembly.

Partnership
We worked closely with the design experts of the customer, demonstrating a clear mindset to make their product a success.

Innovation
We worked around the limitations of certain components of the existing product. This required quite some creativity from AimValley, demonstrating our typical out-of-the-box engineering.

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sales@aimvalley.com
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