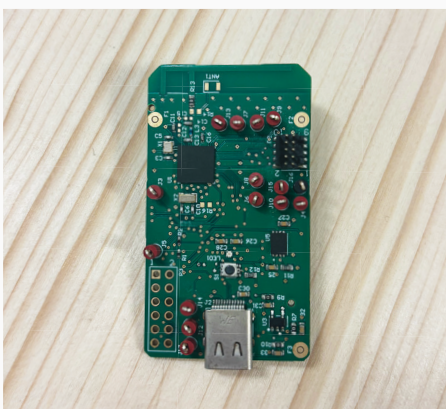


CELUS' Rafael Silva on the Time Spent Searching

I am sure many of you can relate with the two anecdotes I am sharing today. I cannot really identify how much of my actual work time as an electronics engineer was spent on searching – searching for fitting components, searching for errors and, eventually, searching for solutions that would make me need to search less.

I have found this solution in CELUS and am happy that I can now help reduce the amount of time my peers waste.

Here are two situations I have experienced in my previous roles as an electronics designer in my home country, Portugal.



Prototype PCB used on a medical device company to collect users' activity information. This project was developed to collect the patient activity through an IMU sensor, store it on a flash memory and then transfer everything to a software via Bluetooth. On this PCB we have a lot of test points (red pins) to test all the communications between the different devices.

The Chip Shortage & Sourcing of Alternative Components

During the COVID-19 pandemic, a component shortage in the market left us unable to find one of the components for our PCB. Consequently, we were even considering using less trusted sources as purchasing options, just to get our hands on the desperately needed components. By using the CELUS platform, we could have easily explored similar alternative components or solutions, and be prepared for chip shortages.

The Needle in the Haystack

While conducting EMC/EMI tests with a 3D scanner, my team and I encountered a significant issue where we observed peaks exceeding the permissible limits. We faced considerable challenges in identifying the root cause of this problem and dedicated a substantial amount of time to resolving it. We worked tirelessly for a week, day and night, until we finally

pinpointed the issue that had been causing our frustration. Surprisingly, it turned out to be a missing connection on the PCB – specifically, a lack of a ground (GND) connection on the screw holes. This caused the PCB to function as an unintentional antenna. With the CELUS platform, such oversights can be prevented, as it ensures that all connections are defined during the project creation.



Rafael holds a Master's Degree in Electrical and Computer Engineering, Automation and Systems and has gained extensive experience in embedded systems engineering throughout his career. Rafael joined CELUS in 2023 to lead the dedicated team of CUBO experts.

The Solution: CELUS

In my current role at CELUS, I am leading a team of electronics engineers focused on building high-quality CUBOs to enrich the CELUS Library. My team has contributed to defining the CELUS Standard, which ensures all data is created and documented in a certain way, promoting structure, quality, and transparency. As a result, engineers can easily find the data they need for their projects, but also trust that it does what it's expected to do.

Using quality content as the basis for designs, engineers can prevent many errors and get their work done much quicker.



Now it's your turn! We are providing our technology for free to all our peer engineers out there to relieve you of the hassles and manual work you encounter day-to-day.

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