

Optical Engineering

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If You Didn't Take a Picture, You Weren't There, and If You Didn't Write It Down, You Did Not Do It

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I have been on many adventures, including two motorcycle rides across two continents in the past four years, and I always intend to take lots of pictures. I bring the camera and make sure the battery is charged. For some reason, I cannot remember to take pictures. I guess I get caught in the moment and forget about the camera, because when I get back from the trip, I only have a few pictures. It's funny because I had a professor who once told me that "if you didn't take a picture, you weren't there. And, if you didn't write it down, you did not do it." I am certainly guilty of neglecting the first rule, but I am pretty good at not violating the second rule.

The second rule is a pet peeve of mine. When I was a junior engineer, I can remember frequent encounters with senior engineers where I would describe my research or my problem and they would say something like "yeah, I studied that back in nineteen sixty-five and we found that . . ." I would ask whether they had a paper, presentation, or report on the results and the answer was frequently "no." But, they were sure of the results and I would take their word for it even though they could not remember the experimental conditions and details of the results. This, to say it mildly, drove me nuts, and I was determined to not accept this type of input when I became more senior. This "didn't write it down" violation seemed worse at government labs and industry. Most of the academic colleagues wrote down their results. Many of the government people did very quick and dirty experiments in the lab, parking lot, or field, and took mental note of the results without ever writing

them down. The industry people did not write things down publicly due to intellectual property issues, and those non-disclosed documents were frequently lost.

When I became a midlevel engineer, I was assigned as the primary lead engineer to determine the performance of a particular military imager. My resources, at the time, were a large number of government scientists and engineers, industry, and a few academics. The "didn't write it down" corollaries came out of the woodwork with very well-respected scientists and engineers expecting me to take their mental recollection on field tests, theoretical analyses, and lab measurements. I politely refused them all and commissioned investigations on all the important issues that had been identified that did not have well-documented results. I insisted that the results of over 20 investigations involving many aspects of the imager all be published. I summarized the collective results to my superiors. None of the research will have to be repeated.

So, my message this month is that if you are doing an analysis, experiment, or field trial, do your best to document it and archive it (preferably in a publication) so that later, the rest of us can use it. We'll even give you plenty of credit. If you didn't write it down, as far as I'm concerned (along with many others), you didn't do it. Now, where's my camera?

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