

# Lights Out

The ultimate manufacturing facility is a lights out kind of place. Let's dream a bit, shall we? Profiles adjusting themselves; closed-loop feedback humming along, tweaking printing, placement and other bugbears of manufacturing; and, ultimately, perfect assemblies whisking off the line with shiny solder joints and long lives before them. And, don't forget, there's no need for post-production inspection, rework or many humans, so the assemblies are dandily jumping themselves into boxes ready to be shipped. Sigh.

Enter, though, the harsh light of reality. The truth is that, even though many suppliers and manufacturers may be trying to convince you otherwise, *true* closed-loop feedback and lights out manufacturing is a ways off. What you have are many challenges being thrown at you from all sides—stuff like manufacturing shifting from region to region and line setups to deal with; lead free looming large; the black pad phenomenon; and the bipolar obstacles of dealing with very, very large boards and very, very small boards and all the component, materials and reliability issues that come with each. With challenges to face as these, are true closed-loop feedback and a lights out factory just pipe dreams?

I've been watching the electronics industry for over 10 years and have seen it tackle the demons of manufacturing head-on. Surface-mount technology; ESD; DFM; flip chips and increasingly smaller area arrays—remember the time when these issues and others rattled many a soldering iron? However, the industry has made definite progress on each of the above. We now have standards; reams of technical documents and white papers; and manufacturing laboratories and centers of excellence set up to explore these technologies—all in the attempt to drive out process abnormalities, drive up yield and drive down cost.

That's why I have no doubt that issues such as lead free and black pad will be chuckled at a few years down the road, after yields are up and costs are down as much as possible. Anytime yields and costs are the issue—and when are they not?—stuff gets fixed. So, even though true closed-loop/lights out manufacturing is not with us yet, I know a lot of suppliers and manufacturers who are determined to make it as close to a reality as possible. I only wish I could be there to see it.

Now here's the difficult part. I've accepted a position with the National Maritime Center in Arlington, Virginia, as the editor of its publications branch, heading up its *Proceedings* magazine, Web site and other reports. In case you're wondering, the NMC is a Coast Guard Headquarters field unit that promotes marine safety, environmental protection and security. It assists the maritime community in gaining and using the ser-

vices of the Coast Guard, which is now under the helm of the Department of Homeland Security.

It will be very challenging to update their editorial products and a lot of work, but I'm very excited about the new opportunity! On the other hand, I'm very sad to leave an industry I've covered for over 10 years, which has given me the opportunity to connect with wonderful people as yourselves.

I'm leaving you all in the best of hands, however, as the very capable Mike Buetow will be assuming the magazine's helm. Mike has been covering the electronics industry for over 13 years, most recently as editor-in-chief of *Printed Circuit Design & Manufacture*, a sister UP Media Group publication. He's wicked smart and can get to the heart of a story extremely fast, so look for his insightful analysis and leadership to begin with the September issue.

My appreciation for the people in this industry is definitely in order. First, thanks very much to all the staff at UP Media Group for making my job easier and so enjoyable over the years, especially to the hard workers at *Circuits Assembly* who have helped to approach a lights-out atmosphere at the magazine with their insightful editing, writing and design work. Their organization and timing have made *Circuits Assembly* run like clockwork.

A big hearty thanks, also, to all of our readers, contributors, advertisers and industry friends, who have argued with, valued and supported *Circuits Assembly* for almost 14 years. You'll be in good hands with Mike.

Finally, I wish you all much success down the path life leads you and don't hesitate to drop me a note to let me know how you (and the industry) are doing: [lisa\\_hamburg\\_bastin@hotmail.com](mailto:lisa_hamburg_bastin@hotmail.com). It's been a real pleasure.

Lights out for me. Solder on for you!



Lisa Hamburg Bastin, Editor-in-Chief



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