



By Mark Tayles

The Search for that elusive end-of-life component ?

The arrival of July 1st, 2006 marks not only Canada Day, but the first day of the European Union's RoHS (Restriction of certain Hazardous Substances) directive affecting electronic products. From an electronic component perspective, RoHS is just the latest challenge tossed at the supply chain professionals in our industry. It's as if the other frequent component discontinuities weren't enough? Shortages & allocation, End-of-Life component events, Supplier consolidation, and Distributor consolidation are just a few of the hurdles we've come to live with. Of course, these all happen amidst the continuing backdrop of shorter product development time & shorter product life-cycles.

Let's examine just how graphic product discontinuities are (and are expected to continue). For example, PCNalert (an online subscription service that alerts OEMs of product change notifications (PCNs) and EOL announcements) estimates that over 20,000 component end-of-life (EOL) events happen every month! In 2005 alone, there were 260,000 unique EOL events. This is expected to climb to 280,000 in 2006!

The challenge of trying to design an electronic product for a life cycle of even 2 years is a daunting task indeed. Trying to walk that fine line, of choosing components that are enough of a market winner (perhaps having volume success in some consumer products) to guarantee longevity yet avoiding components that 'flame-out' if they miss a market opportunity (for instance, new memory architectures competing for the next widely adopted standards) isn't trivial.

Keep in mind that every unique component represents a product SKU (stock keeping unit), or two or three, that sits in a physical location on your favourite distributor's shelf. What happens now, within this 'perfect' world, when these distributors merge & consolidate? When there are now fewer distributors with which to place your order? At a macro level; suppliers might be pared down and the overall inventory position reduced. At a micro level, the available sources for an individual component SKU is depleted.

An environment of increasing component obsolescence coupled with fewer franchised places to place your order certainly would appear to be fertile ground for independent distributors (or brokers). But what about component quality assurance? Not being franchised by component manufacturers, brokers can't vouch 100% for the pedigree of their product. This same environment has also driven the rise in incidences of counterfeit components stemming primarily from Asia.

Ken Stanvick, cofounder of the consultancy group, Design Chain Associates, recommends that companies implement a strict "exception management" process, when purchasing outside authorized channels. Such a process should include:

- Making sure the part can be tracked through date codes, lot codes, or other means
- Don't assume that the part is good; insist on samples, and test them
- Find out who will stand behind these components--the manufacturer whose name is on the product or the party you buy them from

Ken cautions to be perceptive about warning signs: "If the price is too low or the lead time too short and you can't get samples," Stanvick warns, "red flags should go up." Ken outlines his company's recommendations at <http://www.designchainassociates.com/counterfeit.html#two>.

As dire a picture as the above discussion may paint, there are companies that have grown to fill this market opportunity. A class of companies, such as Innovasic (www.innovasic.com), will re-create the obsolete component from schematics, thereby providing a fit-form-function equivalent device.

Another approach has been developed by Rochester Electronics (www.rocelec.com) over their twenty year existence. REI is actually franchised by over 40 semiconductor companies to take over their post EOL product support. Rochester supplies customer demand in 1 of 4 ways: from residual supplier packaged product; from supplier provided die that is packaged upon demand; from Rochester fabricated die (supplier authorized) that is packaged upon demand; or from a 'reverse engineered' product when no alternative exists. Each of these solutions carry the full Certificate of Compliancy (C of C) documentation.

This triple threat scenario of; more obsolescence, fewer franchised outlets, and more counterfeit components raises a risk that many OEMs are just now becoming cognizant of. The consequences are obvious in Aerospace and Medical electronics. But with 'brand image' becoming increasingly critical to company success, the tolerance threshold for a 'counterfeit event' in any industry will continue to climb. It is probably safe to say that every supply chain/procurement professional within our Canadian industry has had passionate discussions about this topic within the last 6 months.

So with the Canadian winter now a memory and our anticipation turns to July 1st and the start of many summer vacations, here's hoping that the arrival of the EU's RoHS directive is nothing more than a 'blip' on your company's supply chain journey.

Editor's Note

Mark Tayles has over 20 years of experience within the Canadian industry, including 8 years with Intel & 14 years with Avnet. Mr. Tayles recently formed Enabler Tech, a manufacturers rep, focusing on suppliers with enabling technologies. He invites any recommendations/suggestions to the email address above.