

## COTS – Short-Term Solution with Long-Term Costs

The original goal of commercial-off-the-shelf parts has been achieved with wonderful success in many applications, especially in what I call quick turn applications. Items which have a relatively short deployment life – like ruggedized notebook computers – are very well served by COTS parts. However, on items with planned field deployment, with spares, of 25 to 30 years, or more, are facing problems with COTS. Likewise programs that take many years to approve are also likely to have problems obtaining the original COTS devices and shortages and the dreaded “obsolete” word may appear on POs.

This diminished supply situation results in cost increases due to basic Keynesian economics – “supply and demand.” This situation comes about for different reasons:

- The IDMs are not aware of the demand for their parts in military applications – the volume required in the typical military application is too small to be noticed. Besides COTS buyers purchase through distribution, not direct.
- The design/approval cycle for a military platform is significantly longer than their commercial counterpart – e.g. laser printer ICs typically cycle every 6 months and have a total market life of less than 2 years.
- COTS users don’t just want plain old parts; they require “extras” of some sort. These extras make the parts more expensive and not cost effective to the IDM who, upon facing diminishing returns on the part, will declare an EOL. Or in some cases just “purge” the part(s).

The result is thus costly, especially for longer-term programs. If parts that meet the drawing are no longer available then new parts have to be designed in – costly – and qualified – costly, too. Plus there may be a slippage in end product delivery – more costly.

This short paper will investigate and develop these topics further with a consideration to possible solutions.

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