

MSI Core Business

***License Pix2Net Software
Suite***

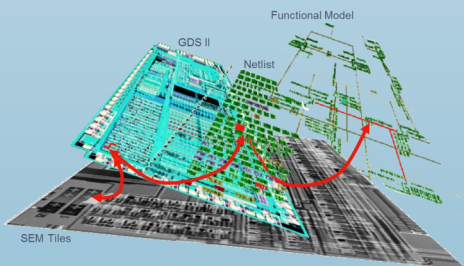
***State of the Art IC Reverse
Engineering***

***Electronic Part
Obsolescence***

***Trusted System/Cyber
Vulnerability***

***Anti-Tamper Design &
Analysis***

IC Patent Infringement



MicroNet Solutions Inc.

***10501 Research Rd. SE Suite C
Albuquerque, NM 87123
Phone: 505.765.2498
www.micronetsol.net
E-mail: mstriz@micronetsol.net***

Managing Electronic Parts Obsolescence

MSI Quarterly Newsletter - Jan. 2014



***Pix2Net Software Suite..... For
Rapid Reverse Engineering of ICs***



Electronic Part Obsolescence

Michael Strizich, President MSI Jan. 2014

The Problem.....

Obsolescence of electronic parts is a major contributor to the life cycle cost of most electronic systems. This problem is prevalent in many avionics and military systems, where systems may encounter obsolescence problems with electronic parts that have a life cycle that is significantly shorter than the life cycle of the deployed system.

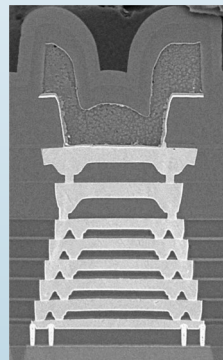
The part becomes obsolete when it is no longer manufactured, either because demand has dropped to low enough levels that it is not practical for manufacturers to continue to make it, or because the materials or technologies necessary to produce it are no longer available.

This is problematic for systems that undergo upgrades and routine maintenance, and can lead to costly redesign solutions.

Complete Functional Extraction

The MicroNET Solution.....

The MSI Team has over 25 years experience focused on rapid, state-of-the art reverse engineering of complex integrated circuits. Approximately five (5) years ago, a software group was formed to develop a suite of software tools (Pix2net), which allows for the complete functional extraction of circuits.



Cross Section View
90 nm Metal Stack

The software suite features a proprietary software guided stage allowing for accurate SEM tile extraction, and stitching to form a continuous mosaic layer. The conductive layers are accurately stacked and aligned for circuit connection. They are then converted

to GDSII to reveal each lithographic layer. Subsequently, the digital and analog library cells are automatically extracted using transistor level net listing in conjunction with a reference functional database containing Verilog, VHDL and SPICE models. Library cell instances are discovered and placed using proprietary pattern recognition software.

Completed Netlists, Models, and GDS II files can be exported to the most common IC chip design software applications to complete the process.

Part Replacement Flow - Pix2Net

Obsolete Part

