Introduction to Focused Ion Beam (FIB) Chip Circuit Edit

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The Focused Ion Beam microscope has become an indispensable part of the modern laboratory. While a number of common configurations are available, this talk will 'focus' on FIB tools developed to perform microchip circuit modification, along with a description of the entire packaged integrated circuit edit process flow. FIB circuit editing is used to produce a limited number of hand-built prototype devices that will roughly mimic what a photomask change would accomplish. This helps resolve functional issues and enables early access to working product for system and software developers. To achieve this, finished modules are disassembled, internal logic nodes are reconfigured using the FIB's "direct write" capabilities, and then reassembled to restore structural & thermal integrity. Questions & discussion are always welcome!