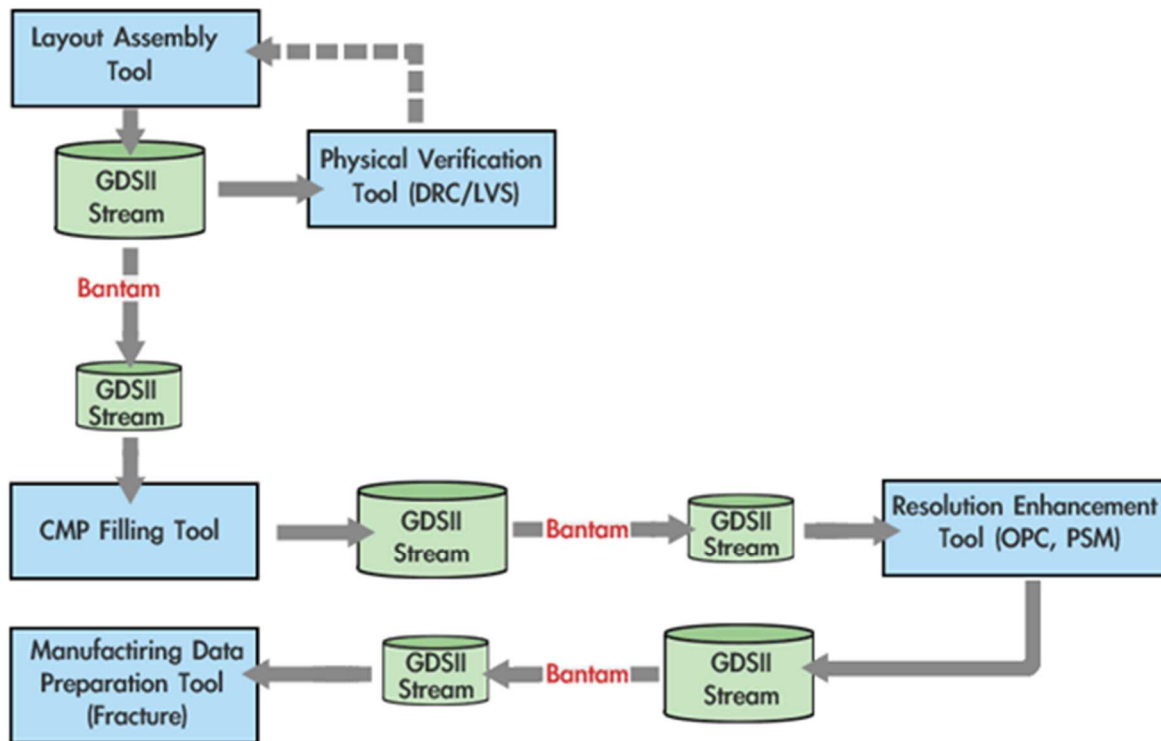## Bantam GDSII Stream Optimization In Your Flow

Bantam GDSII Stream Optimization is typically applied in your IC tape-out flow following all tools that create IC layout data or tools that substantively modify existing layout data in the GDSII Stream file format.

The following diagram illustrates the application of Bantam GDSII Stream Optimization in a generic IC tape-out flow.

Bantam GDSII Stream Optimization becomes more effective as a design's GDSII Stream file grows with the addition Design for Manufacture (DFM) and Resolution Enhancement (RET) features such a "dummy" filling for CMP, Optical Proximity Correction (OPC), and Phase Shifted Mask (PSM). The deeper into your tape-out flow you apply Bantam, the greater effect and value Bantam Optimization will have in your tape-out flow.

For example, a Saratoga Data Systems customer ran Bantam GDSII Stream optimization on a 68GB full chip design that had both CMP filling and optical corrections (OPC) applied to it. Bantam reduced the GDSII Stream file to 607MB, a 99% reduction in file size. Moreover, the subsequent MDP fracture runtime improved by 17X with the Bantam optimized file. The overall MDP throughput improved by 2X.

Another Saratoga Data Systems customer applies Bantam optimization to optically corrected layers, then uses the XOR function of a popular MDP product to check the results against the original GDSII Stream file. Their XOR runtime is typically improved by several hours and as much as 2X with Bantam optimization applied to the input files.