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(54) Title: METHOD AND SYSTEM FOR SELF-LEARNING AND SELF-IMPROVING A SEMICONDUCTOR MANUFACTURING TOOL

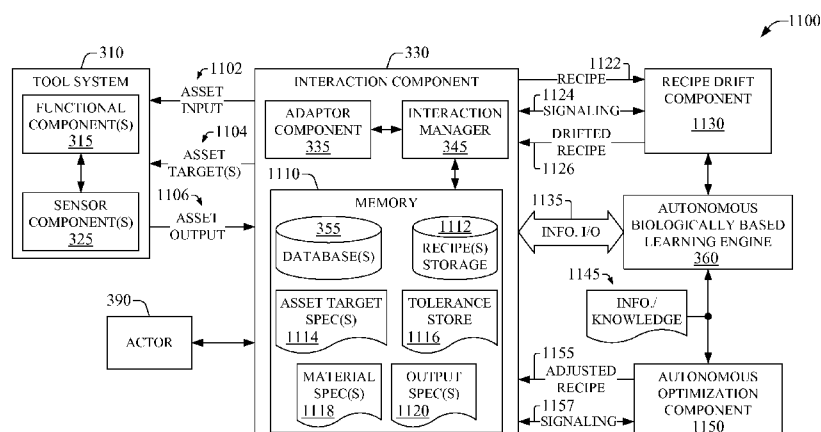


FIG. 11A

(57) Abstract: System(s) and method(s) for optimizing performance of a manufacturing tool are provided. Optimization relies on recipe drifting and generation of knowledge that capture relationships among product output metrics and input material measurement(s) and recipe parameters. Optimized recipe parameters are extracted from a basis of learned functions that predict output metrics for a current state of the manufacturing tool and measurements of input material(s). Drifting and learning are related and lead to dynamic optimization of tool performance, which enables optimized output from the manufacturing tool as the operation conditions of the tool changes. Features of recipe drifting and associated learning can be autonomously or externally configured through suitable user interfaces, which also can be drifted to optimize end-user interaction.