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(54) **Title:** USING DEEP REINFORCEMENT LEARNING FOR TIME CONSTRAINT MANAGEMENT AT A MANUFACTURING SYSTEM

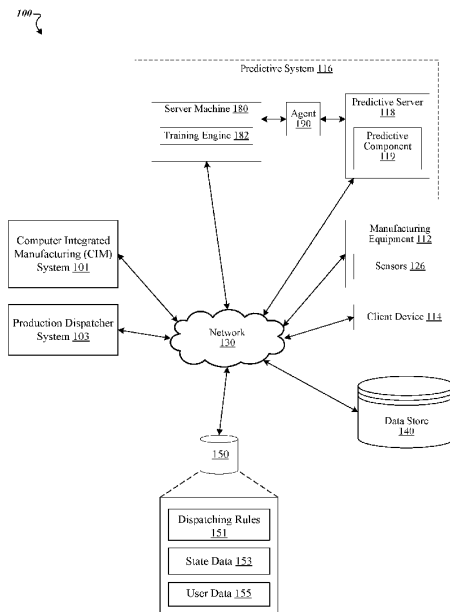


FIG. 1

(57) **Abstract:** A method for training an agent for a substrate manufacturing system is provided. The method includes initializing an agent of a predictive subsystem of a substrate manufacturing system to select an action to perform in a simulation environment associated with the substrate manufacturing system and initiating a simulation of the selected action in the simulation environment. In response to pausing the simulation, the method further includes obtaining, based on an environment state associated with the simulation, output data and updating the agent, based on the output data, to be configured to generate one or more dispatching decisions indicative of a time to initiate processing of one or more substrates in the substrate manufacturing system.

[Continued on next page]

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