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(54) Title: CLOSED–LOOP SCALING FOR DISCRETE–TIME SERVO CONTROLLER IN A DISC DRIVE

(57) Abstract

A method of configuring a discrete–time servo controller in a fixed–point digital signal processor (DSP) for controlling a servo actuator (206) in a disc drive (110) includes obtaining a stable, closed–loop representation of the servo controller (204) and the servo actuator (206). Bounds on the controller states are derived from the stable closed–loop representation. The controller states are scaled based on the controller state bounds, and the servo controller (204) is configured in the DSP based on the scaled controller states.

