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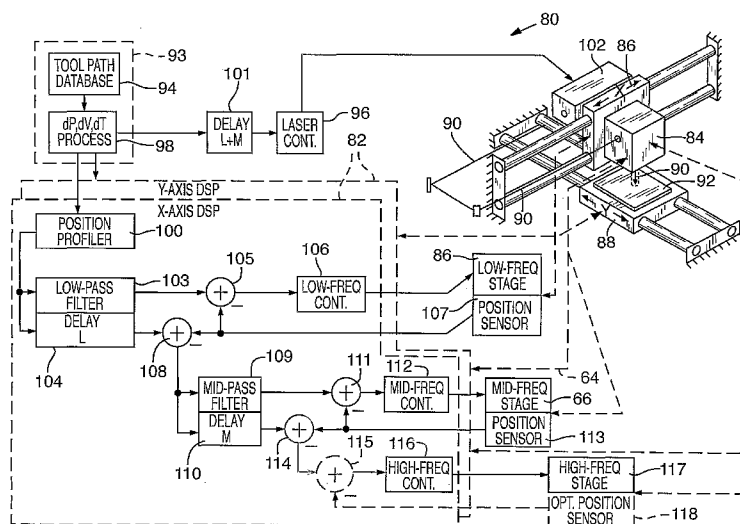
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- (54) Title:** LASER BEAM TERTIARY POSITIONER APPARATUS AND METHOD



- (57) Abstract:** A tertiary positioner system (80) of this invention employs X- and Y-axis translation stages (86, 88), galvanometer-driven mirrors (64, 66), and a fast steering mirror ("FSM") (120) to direct a laser beam (90) to target locations (121) on a workpiece (92). A positioning signal is received by a low-pass filter (103) that produces filtered position data for driving the X- and Y-axis translation stages. The actual positions of the X- and Y-axis translation stages are subtracted from the unfiltered positioning data to produce an X-Y position error signal for driving the galvanometer-driven X- and Y- axis mirrors. The actual mirror positions are subtracted from the actual positions of the X- and Y-axis translation stages to generate a positional error signal representing the difference between the commanded and actual positions of the laser beam. The positional error signal drives the FSM to rapidly correct any positional errors.