

Abstract of the Disclosure

Automatic print rate-controlling and pen-servicing method and apparatus are described for power management and for determining appropriate servicing intervals for plural-pen ink-jet printers. The preferred method involves counting the number of drops (12) of ink that are fired from each of plural pens in the printer's printhead carriage (14) and optionally calculating (20) the pen firing rate such that printer throughput can be controlled to limit time-averaged power and such that pen servicing frequency can be based upon the need for such servicing. The counts are maintained in memory connected, for example, with the printer's microcontroller (20), as are parameters that the microcontroller (20) uses to determine appropriate drop count-based print rate controlling or pen servicing that reduce printer throughput only to the extent necessary. The preferred apparatus includes a drop counter (12), a service station (16) for wiping and spitting plural pens within a printhead carriage (14) and a controller (18) responsive to the drop counter (12) to control the printing rate and to move the printhead carriage (14) into operative association with the service station (16) based upon drop count, firing rate, time-averaged power capability, printhead location and other predetermined criteria.