

ABSTRACT**PRINT ENGINE/CONTROLLER WITH HALF-TONER/COMPOSITOR**

A print engine/controller (10) configured to be coupled with others to drive an ink drop printhead (33). It has an interface (27) at which to receive compressed page data. Image decoders (28, 88) decode compressed image planes in the received compressed page data. A half-toner/compositer (29) a half-toner/compositer composites respective strips of the decoded image planes by halftoning a contone layer to a bi-level version and compositing a spot1 bi-level layer over an appropriate halftoned contone layer. A printhead interface (32) interfaces with the printhead. A synchronization signal generator (89,90) outputs a synchronization signal that is used to synchronize print engine/controllers. In some embodiments, one printhead interface (32) acts as master generating the synchronization signal to synchronize all the print engine/controllers to drive the printhead at any one or more of higher speed, higher input resolution, higher outlet resolution or wider format.

Figure 3