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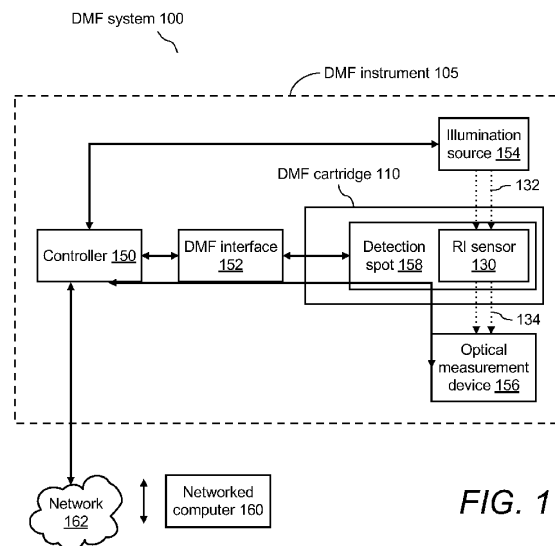


FIG. 1

(57) Abstract: A digital microfluidic (DMF) system, DMF cartridge, and method including integrated refractive index (RI) sensing is disclosed. The digital microfluidic DMF system and DMF cartridge may include, for example, a RI sensor (or sensor surface) directly in the droplet operations gap of a DMF cartridge. The digital microfluidic DMF system may include, for example, the DMF cartridge, one or more illumination sources, one or more optical measurement devices, and a controller. Additionally, a method of using the DMF system and DMF cartridge that includes integrated RI sensing is provided.

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