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Magnetic Field Assisted assembly using programmable array of solenoids - A Manufacturing Approach VIJAY KASISOMAYAJULA, ANTHONY FIORY, MICHAEL BOOTY, NUGGEHALLI RAVINDRA, New Jersey Institute of Technology — The use of an array of programmable solenoids to implement a magnetic field driven assembly of heterogeneous micro-components onto a substrate is studied. A lower limit of component size, the upper limit of the rate of assembly and the efficiency of the assembly from various perspectives is presented. Various statistical tests are performed on the assembly process to determine its feasibility. A comparison is made between this method of assembly and established assembly techniques in the literature.

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