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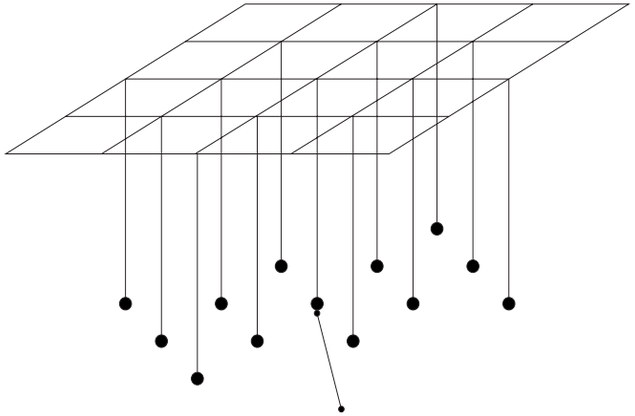
CONNECT

feedback-driven sculpture

DESCRIPTION

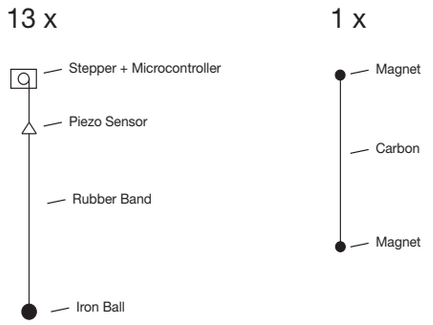
The kinetic sculpture CONNECT consists of 13 automatic movable iron balls connected to a matrix. A physical impulse carrier controls the action of each of the system elements. CONNECT attaches and detaches physical connections between the elements in a dynamic progress. Therefore the sculpture builds its own motion patterns and structures. The connection mechanism in its progress is also very sensitive to the conditions of its natural environment. Therefore the progress is non-linear and unpredictable by the viewer. As a result CONNECT produces complex behaviour, although its structure and rules are very simple.



schematic buildup CONNECT

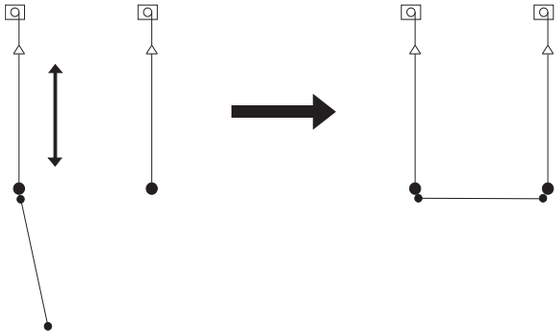
REALIZATION

Each of the 13 modules consists of a microcontroller, a stepper motor and a iron ball connected to it with a rubber band. A piezo sensor is placed between motor and iron ball. So each element could measure and activate its own oscillation through a simple feedback mechanism programmed on each chip.



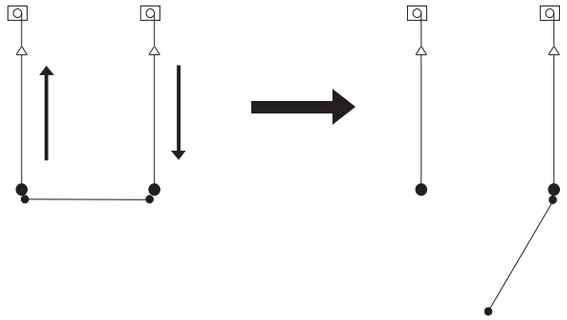
buildup module + impulse carrier

The physical impulse carrier consist of a carbonbar and two magnets. Through the use of its magnetism it could connect to an element. If attached it behaves like a double pendulum with chaotic motion. There is one simple rule: If the impulse carrier is attached to an element, the stepper starts swinging, as long, as the carrier gets detached by a simple analogue mechanism to another element.



attach mechanism

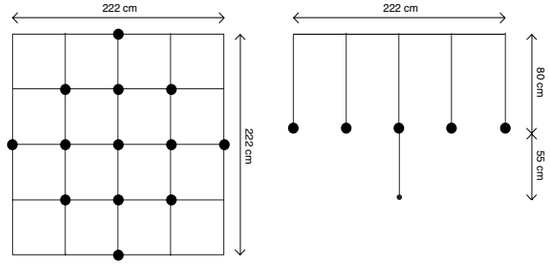
If both connected elements start swinging in a disharmonic way one connection will break because of the forces generated by this coupled spring mechanism. If a module is detached it stops activating its own oscillation. Therefore the physical impulse carrier controls the motion behaviour of the whole sculpture. Its way through the system is non-linear and unpredictable by the viewer.



detach mechanism

TECHNICAL AND SPATIAL REQUIREMENTS

Everything necessary for the installation CONNECT is included within the installation itself. Furthermore a power unit is included, which needs ordinary 220 V consumer power supply. Because of the modular builtup, the sculpture could be adapapted to any space by using different matrix setups. It could be attached to the floor of the exhibition area with six iron cables. This floor should be minimum 2,5 meter.



space dimensions (setup 5x5 matrix)