STUPAFY INTERACTIVE ENLIGHTENMENT

BY THOMAS J. GREENBAUM

This modulated art piece features both sound and lights controlled by a programmed micro-controller (Arduino Uno).

The STUPAfy IE sculpture is inspired by the Buddhist architectural form called a "stupa." The spatial forms of the stupa are symbols and express concepts of metaphysical importance. The title, STUPAfy is a pun which combines the meaning of the word "stupa" and "stupefy" to amaze, astonish and be mysterious and bewildering.

The STUPAfy IE sculpture is crowned by a mesmerizing kiln fused glass globe which rests atop a hand-crafted pine wood base. The hand-crafted fused glass globe is actually a 30-sided spherical geometric figure called a triacontahedron. Sound rings out from the sculpture when two cast brass, Buddhist 'tingsha' bells are struck together by interaction of the audience.

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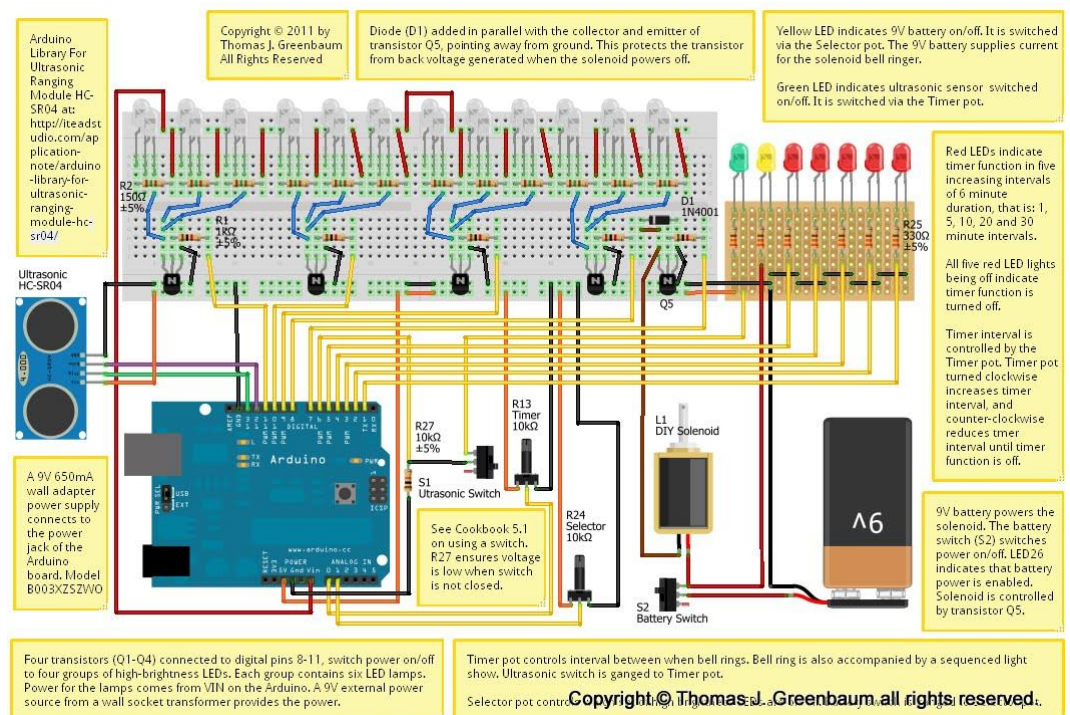
See http://karmatetra.com/stupafy.htm and http://karmatetra.com/thirty_transcendent_values.htm

Karmatetra is my place on the internet, where I can express my unrestrained, pseudo-scientific, philosophical babble and showcase my creative musings.

Karmatetra is my invention; a Portmanteau of Karma from Sanskrit meaning "deed" and tetra from Latin meaning "four", hence four deeds:

- BE GENEROUS
- BE COMPASSIONATE
- BE PATIENT
- BE INTELLIGENT

SPHERE OF INFLUENCE

In *Sphere of Influence*, two separate geodesic domes are illuminated with the same interactive 3-dimensional geometric object. An outside-in projection system projects on the exterior surface of a wall-mounted geodesic dome while simultaneously an inside-out projection system illuminates the interior surface of a kiln-cast translucent glass geodesic dome. Audience members interact involuntarily through four distance sensors surrounding the glass dome and voluntarily by manipulating knobs and buttons on a 'project' box.

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The sensors, knobs and buttons are inputs to an Arduino microprocessor that translates the data into simple text sent via a serial interface to a laptop that is running a MIT Processing script. This script creates a 3-dimensional geometric figure which is then projected onto the domes using two separate projectors.

The object-oriented code creates parametric geometry that changes as sensor data is received. The geometry can morph, spin, change color, expand and contract.

Tom met the great architect and inventor R. Buckminster Fuller while studying architecture. Bucky inspired Tom to explore geodesic geometries, especially those of the icosahedron and triacontahedron which are prevalent in natural structures.

TRIACON INTERACTIVE 3-DIMENSIONAL DATA VISUALIZATION OF A RHOMBIC TRIACONTAHEDRON

See Triacon on the Open Processing website http://www.openprocessing.org/sketch/14609 for an interactive Java demonstration and open source code.

This same MIT Processing code that is available online was adapted for use in the *Sphere of Influence* exhibition.

Both the Processing script and the Arduino Sketch code uses very similar language and development environments making it easy to create data visualizations driven by Arduino sensor data.