

Global String

a network musical instrument & performance environment

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Global String is a multi-site network music installation, connected via the internet. It is a musical instrument where the network is the resonating body of the instrument, by use of a real time sound synthesis server.

The concept is to create a musical string (like the string of a guitar or violin) that spans the world. Its resonance circles the globe, allowing musical communication and collaboration among the people at each site.

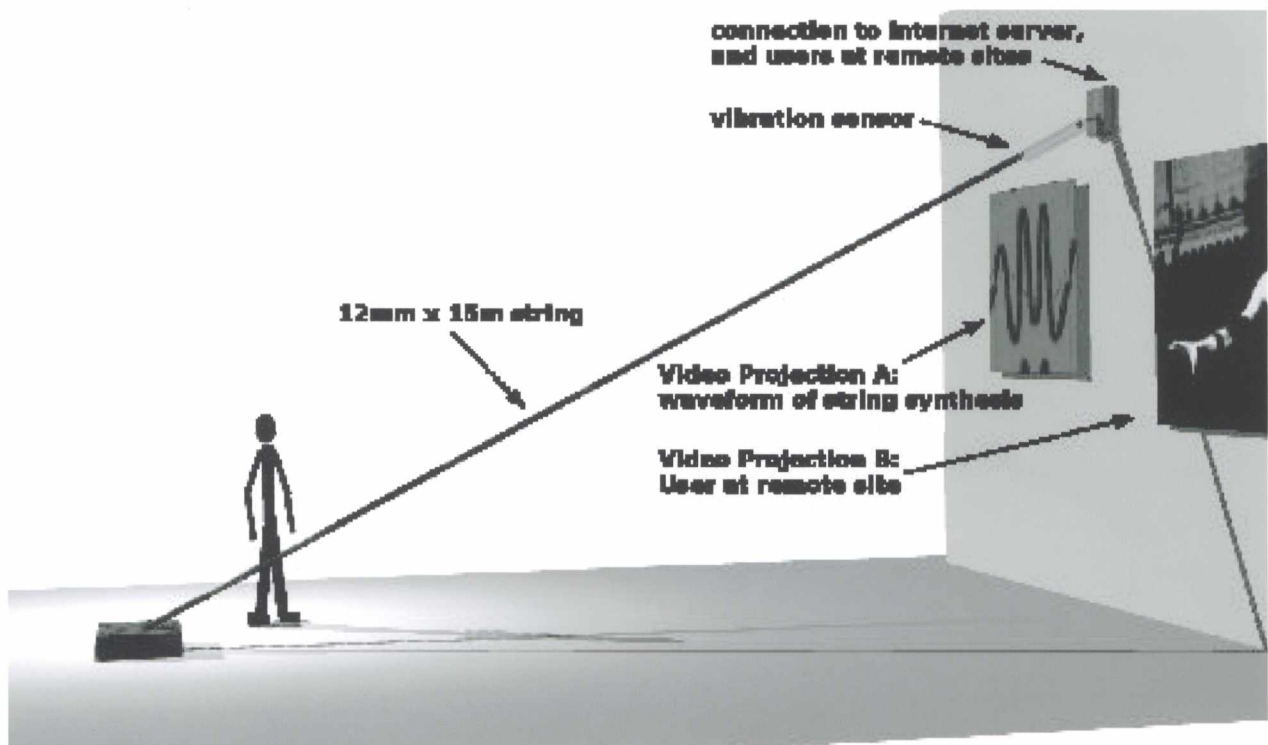
The installation consists of a real physical string connected to a virtual string on the network.

The real string (12mm diameter, 15m length) stretches from the floor diagonally up to the ceiling of the space.

On the floor is one end - the earth. Up above is the connection to the network, to one of the other ends somewhere else in the world.

Vibration sensors translate the analog pulses to digital data. Users strike the string, making it vibrate.





The server is the "bridge" of the instrument - the reflecting point. It runs software that is a physical model of a string of unreal proportions. Data is streamed back to each site along with video, providing a visual connection among the users.

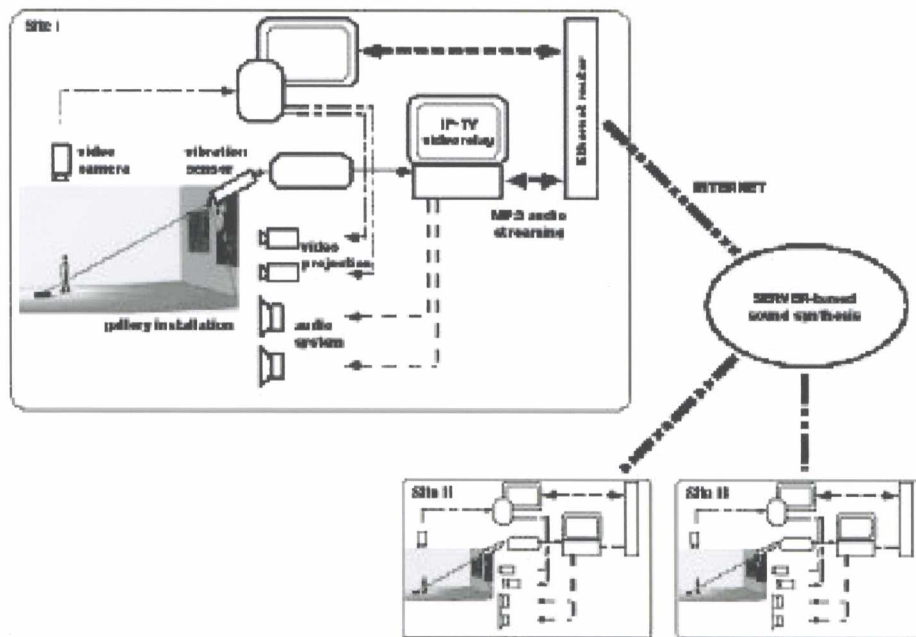
Global String is a scalable multi-mode installation. The number of sites can range from two and up (three being the ideal initial number). The installation can be used in concert mode for soloists at each site to perform together. Global String allows people, be it performers or gallery visitors, to create musical harmonies together over the net.



A functional prototype was created in June, 1999. The structure consists of a base structure, steel cable, and bridge. Ceramic as well as Hall Effect sensors are used to detect both high and low frequency vibrations of the string.



This signal enters the computer as audio-rate and control-rate signal, exciting a physical-model virtual synthesis engine. IP video and MP3 audio streaming connectivity is in development.



technical

Venue:

20m (D) x 15m (W) x 5m (H) (approx.) space with possibility to drive 0.5cm x 4cm bolts into the wall and floor.

Network:

256kbps minimum permanent connection to the internet with hub/router and 10baseT connections.

Sound:

Stereo sound system, minimum 800watts/channel active processor based PA system with subwoofers (ex. Meyer, or EAW).

Video:

Two (2) video projectors with SVGA data input, two (2) projection screens (3m x 4m), one (1) video camera suspended from ceiling.

Lighting:

Lighting spots to illuminate the instrument, yet not block video projection.