

FLOOD TIDE

a sonification of the tide

by John Eacott

3rd November 2008

Flood Tide is an open air musical performance generated by the movement of tidal water. A submerged sensor gathers information from the tidal flow that is converted into musical notation read directly from computer monitors and performed by musicians. 'Flood Tide' is a *live* sonification of tidal flow.

"John Eacott's 'Flood Tide' is a very unusual, and probably important, piece of music. At first you might find it arbitrary and easy to listen to. Closer observation, however, reveals many extraordinary features. The fascination in the music is exactly the non-intentionality behind it: musical events are not decided by the composer or players, as far as I can gather. Something that closely models natural processes is at work here. I am reminded of, for instance, Cage's piece 'In a Landscape', the sound sculptures of Max Eastley but also, inescapably, water movements and the fact that you can watch the sea for hours."

– Composer and journalist Steve Beresford

Overview

A full performance of Flood Tide could last up to 6 hours, starting at low water and ending at high water although shorter adaptations are possible. Performances, sited next to a river, estuary or harbour, are acoustic in order to preserve the listener's awareness of the elements.

The music follows the trajectory of the tide. Starting at low water, the first sounds are low, soft, slow and sparse. As the tide gathers pace, the music gains density rhythmically and tonally while building in tempo and dynamic until maximum flow is reached. From that point the piece gradually unwinds, slowing down and decreasing in density until coming to rest as the tide becomes slack once more. The performance has symmetry in contour although the tonal centre of the music rises throughout representing the increasing height of tide. The audience is invited to relate the visible movement of the water to what they hear. This may be reinforced with a visual display showing the data from the sensor and some of the notation or performance parameters.

Flood Tide is a formal process resulting from the interaction of tidal flow and software and draws from traditions in 'minimal' music. It is also a kind of 'ambient' work in which the audience are invited to *drift* in and out of the music by listening for a while and then moving on, perhaps to return later to hear how the piece has changed. Performers may be arranged as a single group or separated into smaller units to suit the chosen site. Musical qualities may be described as meditative and tonal.

How it works

Flood Tide uses a sensor with an impeller - the kind used to measure the speed of a boat - to register the horizontal tidal flow at a point in the river. This is connected to a computer running custom software that converts an array of parameters, such as the rate of change and distance the water has travelled, into notation for each individual or group of musicians.

What kind of events

Flood tide is a musical celebration of tide and would be suitable for any festival or event with connections with the sea, maritime heritage, navigation, astronomy, contemporary music or new technologies.

Requirements

Although adaptable to the needs of a specific event the basic requirements for a performance of Flood Tide are as follows:

Location

A site adjacent to tidal water where performers and audience may gather. Musicians need cover to protect them and their instruments from rain and strong sunlight. Consideration of acoustic properties is vital such as the proximity of walls or buildings to reflect the sound towards the audience and avoidance of loud sound sources.

Musicians

As the performance may be long, the endurance of instrumentalists is a factor. Previous performances have used celli and tuned percussion as these can be played continuously for long periods. Collaboration with a professional orchestra or string orchestra would be ideal but involvement of other ensembles, including amateur, community or youth groups may be explored. Any size of ensemble may be considered from solo performer to orchestra and / or choir.

Hardware

Flood Tide requires an accurate (to around 0.1 knots) real time reading of tidal flow. This is achieved using our own custom sensor connected to the performance computer through cable and wireless network. An initial survey to determine the placing of the sensor and routing of network and any permissions or safety issues is required.

A combination of computers and additional displays is required for the musicians to read from. Generally one display is needed per two musicians. A performance by a 32 piece string orchestra for example could be achieved using 8 laptop computers with 8 additional displays.

Optionally, a further large display from which the audience can see the tidal flow parameters changing may be incorporated

Previous Performances

The first performances of Flood Tide took place at Trinity Buoy Wharf, London in June 2008. Two further performances were then commissioned by Trinity Buoy Wharf for their Ten Year Anniversary in September 2008. These performances used a quartet of 2 celli, marimba and vibraphone and ranged in duration from 70 to 100 minutes.

John Eacott

is a trumpeter and composer whose career started in the 1980s with anarchic jazzers **Loose Tubes** and industrial metal bashers **Test Dept.** In the 1990s he focused on composing many works for Theatre including **Gormenghast** for the David Glass Ensemble and arrangements for the 2002 RSC production of **Timon of Athens**. Film scores include the Miramax feature **Three Steps to Heaven (1995)**, **Escape to Life** with Vanessa Redgrave (2001) and jazz arrangements for **Alfie** starring Jude Law (2003). His orchestral compositions have been performed and recorded by the **Scottish Chamber Orchestra** and **Docklands Sinfonietta**.

Flood Tide is John's first composition since completing a PhD on algorithmic composition in 2007. Previous algorithmic works include **The Street** - interactive sound environment (2000),

Morpheus - CD Rom of generative electronica (2001), **Intelligent Street** - sound space in which users alter their sound environment by sending text messages (2003).

Contact Information

For performance enquiries:

Natasha Bird

natashabird@hotmail.co.uk

Or general enquiries:

John Eacott 210 Brixton Road, London SW9 6AP

020 7733 0398 h 07950 953 852 m

john@informal.org

www.informal.org