



Mr Garton . . . Webcast part of paving the way for 'democratising' music — Picture: SHANEY BALCOMBE

By GEOFF LONG

ABC Classic FM program The Listening Room is well known for broadcasting music that challenges the senses.

Its first experiment with the online world continues the tradition.

Sensorium Connect, from composer and multimedia developer Andrew Garton, will "Webcast" sampled sounds including brainwaves, heartbeats, and the flow of blood as part of a continually evolving piece of music.

But according to the composer, the most difficult aspect was not the cutting-edge nature of the technology, but dealing with it in the confines of the ABC bureaucracy.

It is the first time the ABC has commissioned a project that integrates broadcast and Web elements.

According to Mr Garton, the ABC legal department now has a clearer framework for commissioning Web projects after initially having concerns about him setting up and running the site.

Another obstacle was that the project involved areas of the ABC that rarely work together. The project involved multimedia, radio art, technology research and development and the legal department.

Mr Garton was positive about the help and enthusiasm he received: "They were all excited about working

## Classic case of blood in the music

together on something creative."

The sounds for the project were sampled from a performance by Stelarc, a performance artist who has been involved in a number of innovative Internet projects.

Other samples were taken from an angle transducer used to measure the bending angle of legs, a sensor that monitors carbon dioxide levels in breathing and a mechanical hand belonging to Stelarc.

Twenty-four samples were processed individually and compiled into sound clusters, then further arranged using chord shifts, semi-tone shifts, random scales, micro modulation, harmony rules and filters.

The music was then converted into digital signals with special software called Koan, which is used to compose what has been called generative music, where the same composition is never heard the same way twice.

While the actual piece of music is

only 10 minutes, a Koan algorithm will continually recalculate the information according to the criteria set by Mr Garton.

The music can be heard from the Web site using Real Audio's streaming software. Two computers are set up at the ABC to run the site: one serving the generative composition and the other to encode it for Real Audio.

Mr Garton was one of the first people in Australia to experiment with the software and has used it for a number of other projects.

He says the music that it creates also has a political element.

"It doesn't rely on structures that we're used to relying on. The idea of non-repetitive music is one that cannot be easily commodified.

"These types of tools are paving the way to a democratised form of music creation and distribution."

Mr Garton has also been commissioned to do another dual radio/Web project for German radio station KunstRadio later in the year.

The project will be part of the Arts Electronica Festival, an annual digital arts festival in Europe.

The Webcast takes place between August 18 and October 26 on ABC Online. As well as the site, portions of the project will be broadcast live on The Listening Room, Radio National's Radio-Eye program, and Triple J.