BEAST - Department of Music

Video introducing BEAST - Birmingham ElectroAcoustic Sound Theatre -- is the University of Birmingham's Music Department's large scale multichannel loudspeaker presentation system.

Title BEAST
Duration 17.57 mins

[INTRODUCTION]

JH: BEAST um

JC: BEAST is...

3: Um.... BEAST

4: Is basically er... hundreds... 90 speakers...

5: Well what BEAST is, in essence, is a collection of equipment.

6: BEAST to me is an opportunity

5: -and the idea of BEAST is to re-inject that dramatic element

7: BEAST is articulation, gesture and specialisation on composition

8: IN the simple sense I suppose BEAST is a large collection of loudspeakers

5: It's an attempt to revitalise material which composers put together in a studio but which loses a little bit when you put it in a bigger public space.

JH: So you are able to diffuse music, electro acoustic music, in a big space for a broad audience not only towards a few people but 100 or 200,300.

JC: It's both a kind of performance and it's also a kind of aesthetic.

[MAIN CONTENT]

Jonty Harrison: We have quite a good storage space here were we can actually walk down the middle of a number of bays so we can access all of the equipment quite readily. So down this bay we have stacks and the trussing, scaffolding, various other bits and pieces, and a box full of - fly case here full of more stands.

James Carpenter: Well I started in Birmingham about ten years ago and I knew about electro-acoustic music but I didn't really know what it was. I knew - 'cause I was interested in -in kind of dance music and now I've been dealing with electronic music for... since... well... since I was playing with MIDI when I was about 12, 13 and I've been interested in it ever since, really. And then been coming to -seeing- to Birmingham and seeing a completely different take on how they deal with electronic music, al lot of the tools are the same but the actual end result is very different. That's why I stay here 'cause I like the aestheticism, I like the idea behind the music and I find the music very interesting and also the fact that we've got BEAST as a performance outlet is a definite compelling reason for being here.

Jonty Harrison: And then in this bay we have predominantly loudspeakers. Down this side we have a number of Genelec loudspeakers, similar size, relatively small, slightly different sizes for different uses. And some of them can be put on stands and angled down and so on, and so forth. Some of them are put on the trussing, and then down this side we have larger speakers, we have 880Cs, some more Genelecs, some large Genelec speakers.

Annie Mahtani: I studied at Birmingham as an undergraduate on the Music degree course and before coming one of my reasonings for coming here in the first place was that I was interested in electro acoustic music and I'd heard about BEAST and I wanted to see how it all worked. On choosing my postgraduate courses I did look around at other universities but decided that to stay at Birmingham because of BEAST and the performance opportunities that they offered.

Julien Guilamat: I came here to do my Masters in Musicology and I discovered what was really composition - the full meaning - and I met Jonty at the studio and I went to a concert of BEAST and that's really I think the moment when I understood the full meaning of electro acoustic music.

Jonty Harrison: All have different characteristics- so the different loudspeakers give a different quality to the sound 'cause they're different designs by different manufacturers and so on. They emphasise different parts of the frequency spectrum and generally mean that you can tailor the way the sound is working in the space according to some characters-so if you have a dark character, you can use a darker-sounding loudspeaker. Of course, technically, all of these speakers are full range but they do have subtle differences.

Roz Coull: I actually did my undergraduate degree here, with Jonty so I already knew what BEAST was, and mini BEAST. So, basically, in terms of doing a PG course, I knew what I could then do, so for my Masters I worked in stereo and I'd then go on to diffuse within the BEAST system. And for my PhD I've decided to stay here, because I knew if I was going to explore movement and 8-channel studies, then this I could develop more through the use of BEAST and I could express myself with that.

Jonty Harrison: And then in this bay, we have a row of basically racks of amplifiers, the subwoofers from the system sit on the top of those, we have flight case full of mechanical matters like rubber matting and tops for the speaker stands- we have tweeters in a flight case.

David Hindmarch: As a composer, having a multitude of speakers allows you to experiment in a much more cogent way with the idea of sound in space. Writing for the BEAST system has meant that I have - has totally shaped the way in which I think about sound, and space.

Sound always is characterised by its movement in space and its spacial and spectral characteristics. Electro acoustic music for me is the extrapolation of found or concrete sounds recorded and subjected to signal processes. Underpinning that is the formation of ideas within these sounds. The idea of having pieces performed is of paramount importance to me as a composer. The idea of having the ability to diffuse sound is also of great importance, and also to do, to create multi-channel compositions is very, very important.

Jonty Harrison: The multi-core and signal cable flight case is very important - you get a mixture of active and passive loudspeakers, so sometimes we need to get a signal over great distances, sometimes we don't. We just need to get the speaker cable over a greater distance. So we have boxes of electronics - of four-ways and two-ways - for power, we have boxes more amps here, some of the smaller speakers, plus also boxes of interfaces and of course box upon box upon box of cable.

Garfield Benjamin: Well I first came here for my undergraduate degree, and it seemed a good balance of including composition as a major part of it and a normal music

degree, and particularly for the studios that had an interesting music technology and using computers to compose so it seemed the in some ways the most extreme ways of using computers to compose and that was something I was very interested in. I had never actually heard of BEAST until I came here on the open days and demonstrations of the studios and it was definitely the reason I carried on for postgraduate study here. Having the BEAST system is incredible.

Jonty Harrison: We're in the process of trying to rationalise this and tidy up a bit so we don't have to move quite so many small boxes around but it's all time and weight... because that's another indicator of how the system has grown because once upon a time, we could actually go to a concert in London in a three and a half ton truck, with three people in the cab.

Eric Bumstead: The stuff that I play personally is mostly my own work, which is very noisy and based on Yannis Stylianou's algorithms, but we play various stuff, we play acoustic stuff, more of the French style things back to Schaeffer and stuff based on recorded sounds - that's where the BEAST was mostly found and that's how I found out about it.

Jonty Harrison: When we went to Denmark a couple of years ago we took ten people and we flew and the system - because it now weighs rather a lot - was sent via a trucking company who brought a 26 tonne truck and so that's an indicator of how the system's grown - it's quite extensive and its quite heavy to move about.

George Forget: I'm here because I'm -I was awarded a residence prize and Bourges last year, and as I understood the BEAST has a partnership with Bourges Festival. So when you win a prize in Bourges, you can go in several places and I came here. I also heard about the huge diffusing system, the huge multi-speaker system they have to diffuse music, to play music.

Jonty Harrison: I joined this University in 1980 and I've been a freelance composer/music copyist and general dogsbody in London for several years. One of the things I was doing was working at the National Theatre where I was doing sound work. I took this job and from the first couple of years didn't do a great deal with the studio but we had started running courses and some students had started producing pieces so I inherited the studio which was modest... let's say. And full of loudspeakers. At a certain point I decided it was time to bring this music out of the studio and try to present it to the public, so we did a lunchtime concert. And, I decided we needed a name to market this event, so I was doodling with my pencil and I produced 'BEA' for Birmingham Electro Acoustic, then added the 'ST' and thought wouldn't it be nice if we could get an acronym like that. And then of course I thought of the word 'Sound Theatre' which completely describes what we do. It's an attempt to revitalise material which composers put together in the studio, but which loses a little bit when you put it in a bigger, public space. And the idea of BEAST is to re-inject that dramatic element that could get lost when put in a larger space. When you go into a large space you have a large acoustic, you have a lot of people, not everybody can sit in the sweet spot of a concert hall or a performance space, like you can in a studio. Composers have the benefit of sitting in a studio for several weeks or months working on material; and knows exactly what it sounds like at the sweet spot, but the audience can't know that. And it you're sitting on the back row on the left, you're going to get a very different image. So BEAST is about recreating image, and believable image, reintroducing the drama - so if you have strong left-right movement you make sure everybody can hear it. If you have sound receding into the distance you actually have distant loudspeakers so you can make that distance cue in the brain very clear, very audible. And audible to everybody in the audience, not just the luck person who happens to be sitting slightly in the middle.

Back in '82, it was 8 loudspeakers plus a few tweeters, then we added some subwoofers, so we had proper bass in the system, then we bought more loudspeakers, then we bought mixers to make diffusion better, 'cause what you take - what you do when you stereo in a public concert, is you take a stereo signal and you multiply it times many, you then deploy the stereo over different stereo loudspeaker arrays. And so typically for a stereo concert you would use BEAST you would use 24, 32 actual speakers so you'd have up to 12 or 16 times the number of original tracks. Now of course in more recent years, especially in the digital era, multi-track facilities have become far more readily available and cost effective. And many, many manufacturers settled on 8 as a standard. And so BEAST took a conscious step in the direction of the diffusion, i.e., the deployment of the original source material over many arrays of speakers, to take that diffusion on to the next level and do diffusion of 8 channels.

Scott Wilson: I do a couple of things. In general I'm in a sense just another composer who's involved in working with BEAST like everybody else, who's involved in working with BEAST. I've also been very active in developing software for BEAST for - either for composition, but mostly for presentation. So this is, you know, coming up with software which allows a kind of flexibility in terms of what sort of pieces- how they're configured, how you're going to present them, and also coming up with new ways of using all of these all of these loudspeakers, I mean one of the things that actually has become possible in recent years that wasn't before is that you can actually easily address each loudspeaker as a sort of completely separate entity. So we've needed to come up with some software which allows us to move between varieties of- a variety of approaches, a variety of configurations, and variety of ideas about how to use the system very quickly so I've been doing that.

Sort of in conjunction with that has been a kind of a larger research project which is in the simple sense has to do with exploring ways of suing the kind of potential of this with, you know, with the technology we have now. What does that open up? What does that somehow allow you to do what you couldn't do before? Sometimes the question is asked about whether we've gone a bit over the top... and there are instances when I wonder this myself in terms of the number of speakers. We can put so many speakers in the space that it's very difficult sometimes to determine where the sound is coming from - from this array or another array - it's actually quite close. And sometimes the stereo piece is actually is more dramatic if you use fewer than the 80-odd we typically install. Maybe go back to something closer to 24 or 32 we used to use. But of course the point about the proliferation and the number of speakers is not that we would necessarily deploy a stereo piece over a 80, but that for an 8-channel piece we may well need 80, because that's only ten arrays of eight. So you know, in order to get an 8 channel image which is close, another 8 channel image which is large, another 8 channel image which is high, another which is distant etc, etc, all these images the same sort of way we think about the use of diffusing stereo, to do that you need a lot of loudspeakers. When the next piece come along you have all that installation for an 8 channel piece but the next piece in the concert might be stereo, you might not necessarily use the same number of speakers in stereo. So it's a question of - like all these things - of artistic decision. Because it's important for a number of decisions you're making about diffusion, about performance in concert, are artistic decisions, they're not technical ones - I mean technical issues will be solved in the installation of the system and in the software that we now use and all the rest of it.

The big questions that remain open and open to abuse of course - like anything - are musical ones, artistic ones. So you're making choices. It's about having options. And again if you think not so much about the sounds are coming from over there, no, no its coming from over there - you take that attitude out of the equation - and think about an image that is intimate, and image which is expansive, or an image which is distant or, you know - the ability to have something - a sensation of the sound being below you, or very much above you, or close in, or whatever it is, those kinds of ways of thinking - are the ways that drive the systems.

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