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WHY I STILL WANT TO MAKE MUSIC ON THE SYNTHI 100

I started out doing tape music at Radio Belgrade in 1968, thanks to the help of composer Vladan Radovanović and the encouraging policy of the Radio Belgrade Third Programme staff. In 1970s, Radio Belgrade approved funding to equip an electronic music studio. I already had some contact with EMS London and Peter Zinovieff and had seen and tried the VCS3. I recommended that Radio Belgrade contract EMS to develop a large synthesizer for the new studio. And hence the Synthi 100 was born. Since it included a digital memory for sequencing control voltages and triggering, it could be properly described as a hybrid synthesizer.

The studio opened in 1972, and quickly put Belgrade on the map in the electronic music (as we called it then) world. The first piece composed there was my own "Hardware Performance", and after that many composers from at home and abroad came to Belgrade to make music.

Computers came to EAM. At the Belgrade studio we were of course looking towards computerization as the future of electroacoustic music, but as the Yugoslav economy began to crumble there was never going to be any funding for that.

EMS Stockholm was a world leader in computer music in the 80s. I managed to go there thanks to a grant from The Swedish Institute, eventually staying in Sweden permanently.

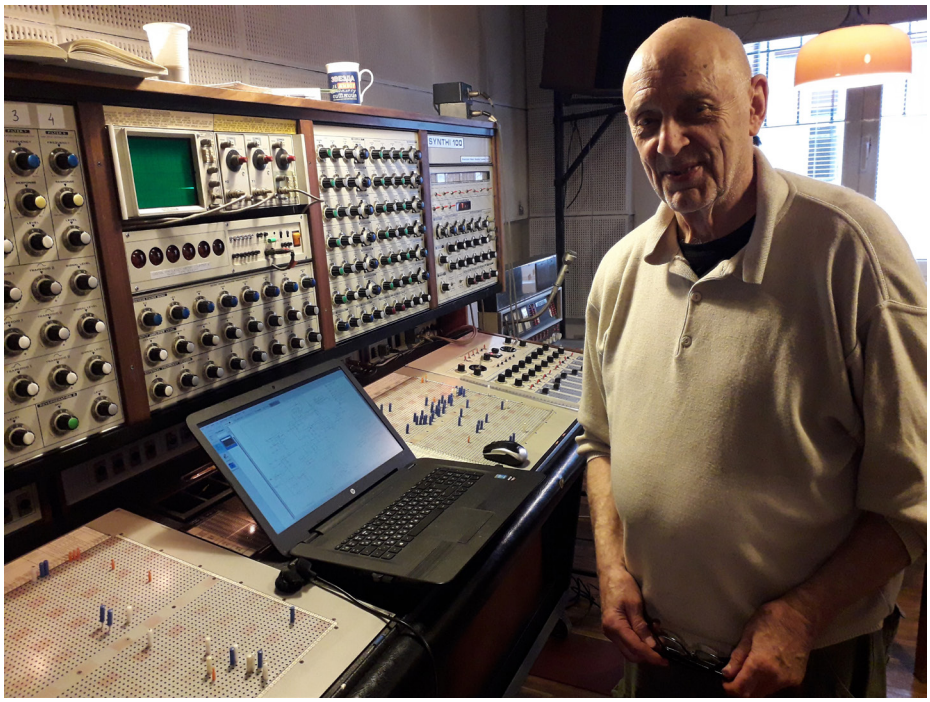
Just before leaving for Stockholm, I sold my VCS3 (worth its weight in gold today), telling myself that it was old-fashioned gear already and I needed the money.

At EMS Stockholm I worked a lot on digital signal processing for the VAX, VMS, and the FPS array processor.

Nowadays, on my Linux laptop/desktop, I have many times the computing power that we had in the late 80s, in cabinets the size of refrigerators! In Pd I can do more or less everything I could ever do even on the huge Synthi 100...

Hold on though. Actually I can't. The latter-day patching techniques I started to

develop in the 80s and have extended since my recent reunification with the Synthi 100, involve unorthodox, "impermissible" connections giving rise to unstable feedback configurations which just don't work in the digital domain.



Paul Pignon with Synthi 100 at Electronic Studio Radio Belgrade, photo: Svetlana Maraš

I have tried to reproduce in Pd some of the elementary unstable circuitry I can create on the Synthi 100, but some of the connections are simply forbidden. The stumbling block is that digital signal processing most often requires a buffer of samples to be collected first before an algorithm can be applied to the sound. There's an inevitable delay while the samples are collected. So the kind of feedback loop which is so typical of what I do in my zoetic engines on the Synthi 100 just won't work. I cannot say for certain that some kind of workaround cannot be implemented in a digital patching scheme, just that it would be a challenge for which I don't have enough years left to take up.

Could I achieve similar results with cord-patched synthesizers, all that old school hardware which is experiencing a huge renaissance now? I must admit, I haven't even tried, but I'd say no, not with the degree of complexity one can achieve on the Synthi 100. With some 20 patchcords they already look like a jungle—impressive on stage or Facebook but tripling it is quite unfeasible. Also, the unique ingenious patching solution, typical of EMS London since the VCS3, allows things which, as I said, aren't really allowed. It also allows quite outrageous combinations of control signals and audio.

So, the essential cause for my renewed enthusiasm for the Synthi 100 is that I can, using complicated and somewhat outrageous patches, create what I experience as organisms, with a life of their own—hence my description of them as creatures, or in a complete ensemble as a zoetic engine. Furthermore, I can interact with them either through audio or physical movement in a way which feels quite alive, hence my use of the adjective "zoetic."

At the documenta 14 art exhibition, visitors were able to directly excite my zoetic engine though a microphone, which some found quite fascinating. It also fascinated me how, at night, when everything quietened down, the creatures were extremely sluggish and made very few sounds, then got really excited when the day began, and visitors made noises.

What I'm describing here is something very specific to myself and the Synthi 100. I am nevertheless somewhat sceptical about the motivation for the massive retro trend now in full swing, for not just analogue synths, but even LPs, cassettes, reel-to-reel and what have you. I'm so old I remember when those things were invented, and thankfully superseded. I do feel much of the trend is just a fad. The recordings put out on cassettes are probably mastered in a high-resolution high-sampling-rate digital format on a computer, for example.

And as for real-time sound processing, most of what composers do live can be done better (and much more flexibly) on a computer. My colleague and fellow member of BOP, Thomas Bjelkeborn, creates incredibly complex streams of real-time processing on a laptop. It's a matter of spending a lot of time in development, but the inherent mutability and extensibility of digital processing makes it in many ways far superior to stacks of analogue gear. Achievements are easily shareable with peers, and if one, like me, lives in the open-source community, it doesn't cost anything.

Of course, there is a certain physicality in working with analogue gear which alters the way composers interact with their tools, which is an important aspect. Some say the synth sound is different. I cannot say I've done any blindfold comparisons myself, but, as I have gleaned from the internet, some people have, and there are comparisons up on SoundCloud tending to suggest that such claims are rather dubious, insofar as one is just implementing conventional sound synthesis.

I'm glad Synthi 100s are being resurrected all over the place now, because they do offer composers some unique opportunities which just aren't accessible with any other tools.

Some relevant links:

https://soundcloud.com/galingong/1-square-seq-norm?in=galingong/sets/eurorack-vs-software-blindtest

https://www.gearslutz.com/board/electronic-music-instruments-and-electronic-music-production/1065261-analogue-vs-software-blindtest.html

https://theproaudiofiles.com/analog-tubes-vinyl-future-retro/

http://forum.vintagesynth.com/viewtopic.php?t=54586&start=30

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