

chair.audio

*Linux Audio Conference 2018,
Berlin*

Max Neupert, Clemens Wegener

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Gefördert durch:



Bundesministerium
für Wirtschaft
und Energie

aufgrund eines Beschlusses
des Deutschen Bundestages



Existenzgründungen
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Zusammen.
Zukunft.
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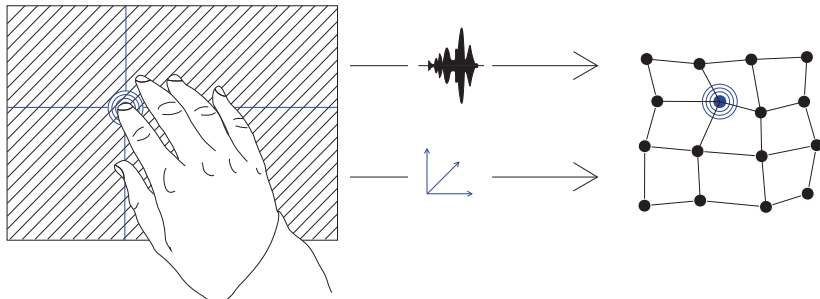
Who is chair.audio? Team

- ▶ Max Neupert
Industrial designer, media artist
Design, strategy & media
- ▶ Sebastian Stang
Computer scientist, embedded Linux, kernel extensions
Software, firmware & drivers
- ▶ Clemens Wegener
Musicologist, computer scientist, musician
Research and development

Our vision

chair.audio is making digital instruments with analog interfaces. Our mission is to make sounds tangible. That's why we are developing instruments with haptic interfaces for electronic sound - both analog and software synthesis. Our Instruments have excitable surfaces that you can scratch, hit or bow.

Current state chair.audio



Goals

- ▶ Intuitive quality of interaction (acoustic looking glass)
- ▶ Fine tactile control for making electronic sounds
- ▶ Wide range of possible timbres and mapping flexibility

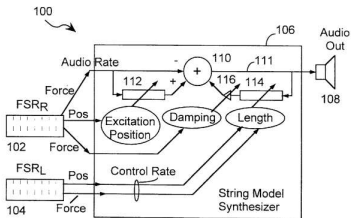
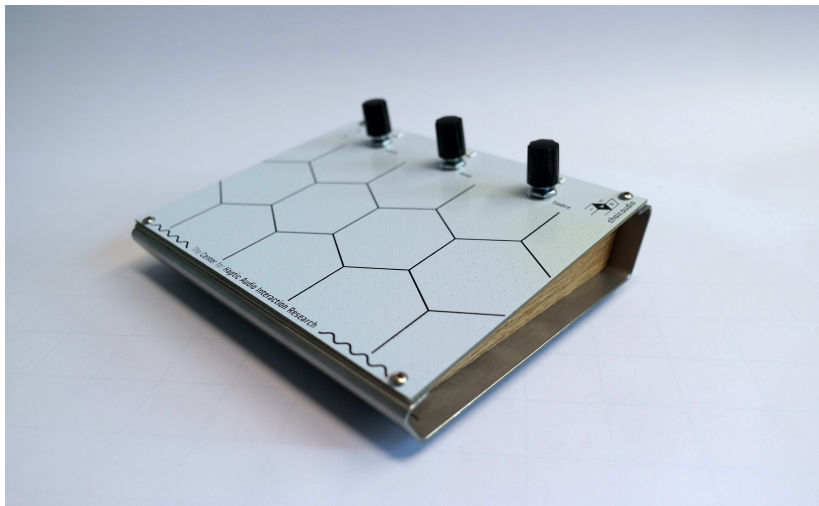


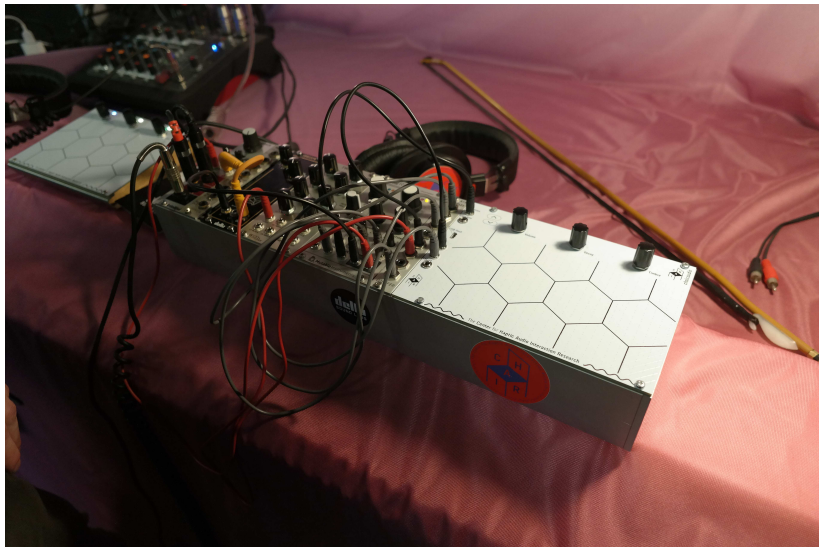
FIG. 3

- ▶ Perry R. Cook: Remutualizing the Instrument: Co-Design of Synthesis Algorithms and Controllers, Proceedings of the Stockholm Music Acoustics Conference, August 6-9, 2003
- ▶ Perry R. Cook: US Patent 6,049,034, Apr. 11, 2000

Instrument and Interface chair.audio



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Cypress PSoC5 Firmware → Device driver → Pd external

- ▶ legacy: libusb implementation
- ▶ current: Linux kernel module implementation (GPLv3)
- ▶ to come: MacOS and Windows drivers (closed source)

Synthesis models currently implemented in Pure Data

- ▶ Karplus-Strong+FM
- ▶ Filterbanks
- ▶ Granular and concatenative synthesis (`timbreID`)
- ▶ Physical modeling (with `pmpd~`)
- ▶ Physical modeling (with Synth-a-modeler, SaM-Designer)

Web, social media, etc.

<https://chair.audio>

<https://twitter.com/ChairAudio>

<https://facebook.com/chair.audio>

<https://github.com/chairaudio>

<https://soundcloud.com/chairaudio>

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