INIMI

Clint Paul Büchner

Bauhaus Universität Weimar

Fakultät Medien | Faculty of Media

B.F.A. Medienkunst | Mediengestaltung

Interface Design Projektmodul: Interface Design 2

Einführung weiterführende Methoden und Technologien im Interface Design

Betreuer: Dr. sc. hum. Jens Gellhaar

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INIMI

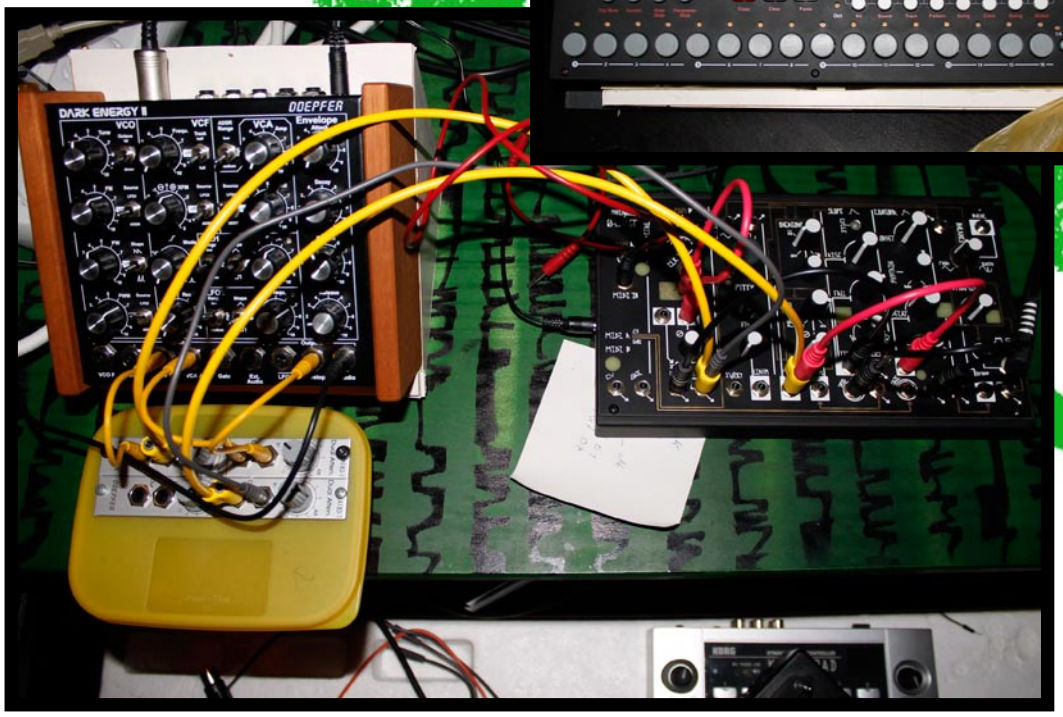
- Interface Nature Interactive Music Instrument
- is an electronic instrument for trees
- Art related instalation
- not musical, - commercial instrument
- is controlled by organic / natural influences (light)
- consists of electronic digital and analog components,
  create the sounds
- translates organic visuele patterns into synthethical audio pattern

Approach

- There are many musical instruments that created for man has be
- commercial aspect is in the foreground
- which form has an instrument which is not created for humans
- how is it served and standing as well as meaningful music or sound art in the center?
- if the human factor plays no role, for what target group is it intended
- animals, insects, plants mushrooms, environment (mountains, valleys, forests etc ....)

Approach

- Man builds profitable objects for Him who serve Him
- nature is rarely the focus here
- I want to create an object that does not have the approach to serve people and to profit
- what do musical instruments look like ?
- how could they look ?
- this will create the opportunity
  to come in Interaction
  with nature
  and to create awareness



Target groups

- will be plants
- Shrubs, grasses, mainly trees
- no matter what kind of tree
- it is important
  that the tree
  has many
  branches and
  leaves,
  which generate
  a shadow by the
  sun‘s rays

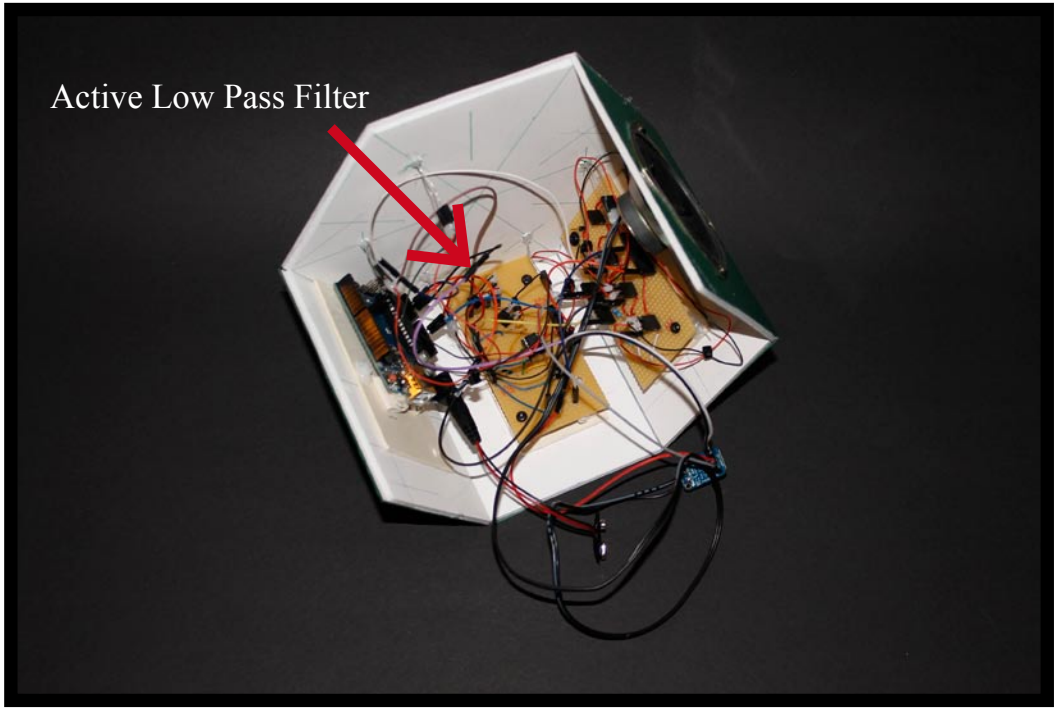
- INIMI can by a single tree
  to be played
- realization of an orchestra by increased number
  from INIMI

Setup

- Setup is made up of Natural Factors
  analog and digital data are processed
- the natural influences include the sun (light, shadow),
  Wind, clouds and trees
- INIMI is supported by one or more trees in
  a natural environment played
- eg. Forests, meadows

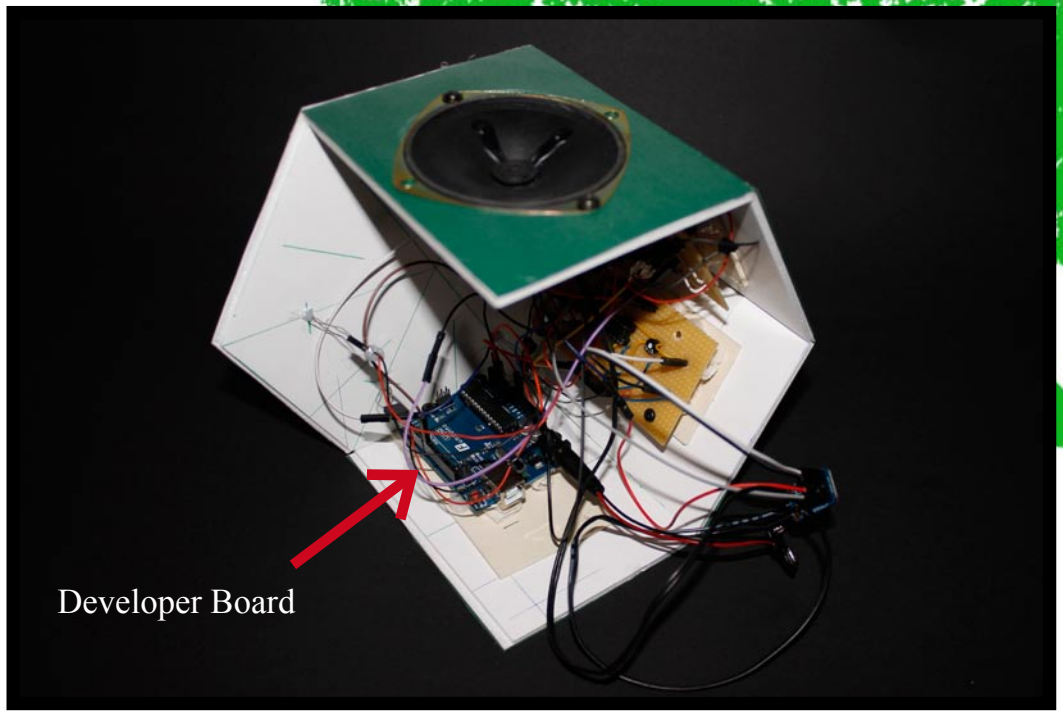
Functionality

- INIMI consists of two sections
- analog section
- Active Low Pass Filter
- filters the frequency of the harmonics
- Volume Control changes the volume
- Light resistances read the intensity of the sun
- Musical characteristics are controlled by the light intensity

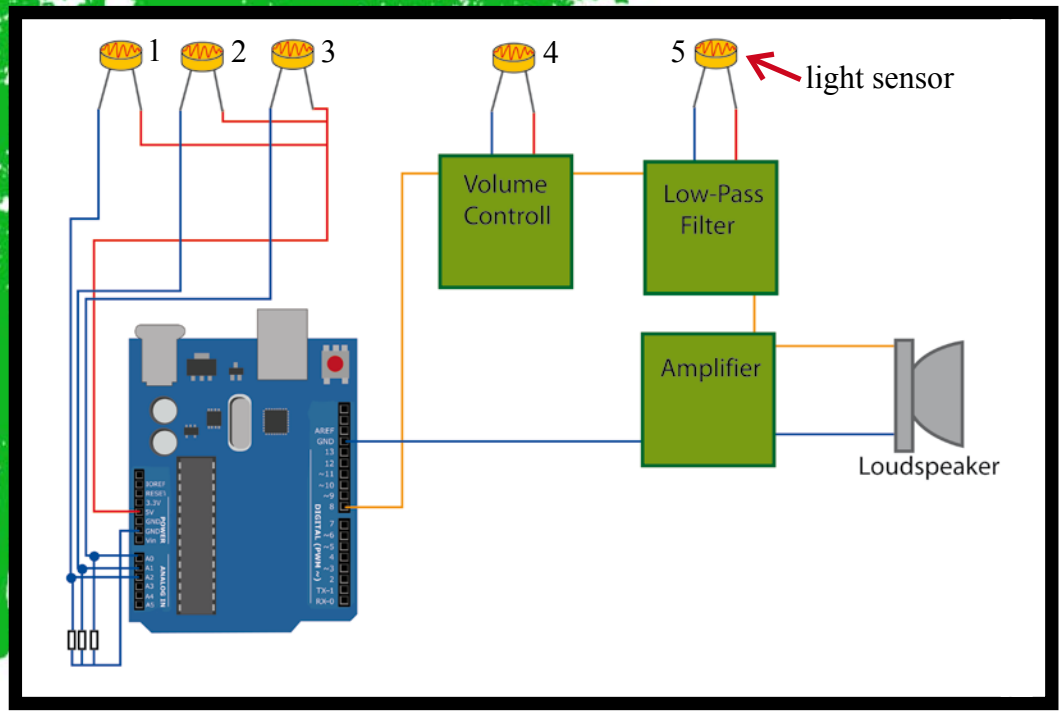


Functionality

- digital section
- is a digital microcontroller.
- Developer Board (Arduino) processes the analog data and translate it into digital data
- digital data defines musical values
- pitch (note height),
- Arppegiator (coherent sequence of tones)
- Gate (note length)



Functionality



- INIMI generates sounds in real time
- Light resistance one, two and three interpret the light intensity and control the microcontroller
- Microcontroller changes the sound through the speaker
- Frequency of the note height, rate of the arpeggiator and sound dynamics
- Light resistance four controls the volume
- Light resistance five controls the frequency of the harmonics
- INIMI creates a dynamic sound game, which is controlled by natural influences

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INIMI