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j-DAFx

Digital Audio Effects in Java

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Scope & Aims

We wanted

- **a learning platform for lectures on DAFx**
- **usable directly over the Internet**
(or at least downloadable)
- **no or little software installation needed for the user (i.e. a PC-room in the university)**

Key Features

Provide the following key features

- **easy-to-use** (for everyone)
- **variable parameters** (user-interface)
- **no software installation needed**
(whether stand-alone or host-applications)
- **platform-independent**
(Windows / Unix / Linux / MacOS / ...)
- **use of „own“ audio files to process**

Multimedia Techniques

Different possibilities for implementation

- **rich stand-alone applications** → maintenance?
- **plugins for audio-(host)-applications and/or media-players** → platform-independent?
- **Macromedia's „Flash“** → processing?
- **the „Processing“ language** → processing?
- **MATLAB implementation** → interactive?
- **Java Applets** → yes!

Java-Applets

Why Java-Applets ?

- **graphical user-interface**
- **platform-independent**
- **usable over the internet**
- **process „locale“ audio files**
(there are some security restrictions)
- (almost) **no software installation**

Implementation

- **Common base class** (using „JavaSound“)
 - controlling the data flow
- **Specialized algorithm classes**
 - sample-by-sample processing
- **Graphical user-interface** (using „Swing“ elements)
 - playback buttons
 - visual representation of algorithm
 - controls elements

Demo



Use and download the applets at:

<http://ant.hsu-hh.de/jdafx>