

Digital Noise Control

PROTECTING AGAINST PIRACY

www.digitalWEED.ie

Introduction

This technology has been developed, from the start, to address the needs of those for whom it is imperative to protect their content before release. It is also flexible enough to be used as a tracking mechanism to help identify the sources of illicit distribution. Now at prototype stage, the team behind this development is calling on stakeholders to help guide its further development so as to best serve their needs.

What it is

A digital watermark that adds “noise” to render audio unattractive to copy and worthless to anyone except the intended recipient. Unauthorised distribution of “cleaned” audio is easy to trace using unique embedded watermarks.

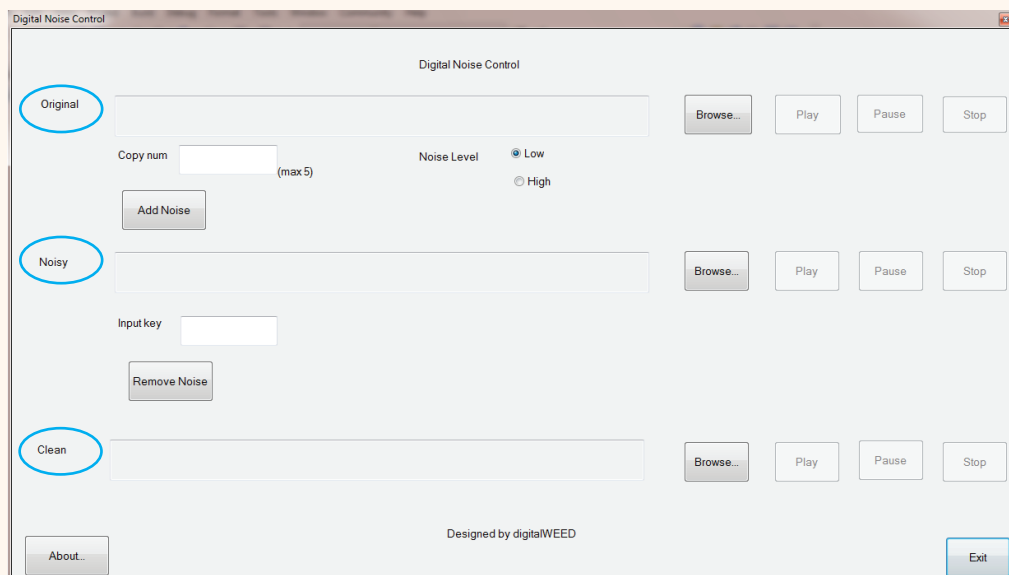
Who is it for

Content owners and producers who wish to make available mixes to trusted individuals, secure in the knowledge that no leaks will be possible even if the material is intercepted by unauthorised recipients (e.g. pirates)

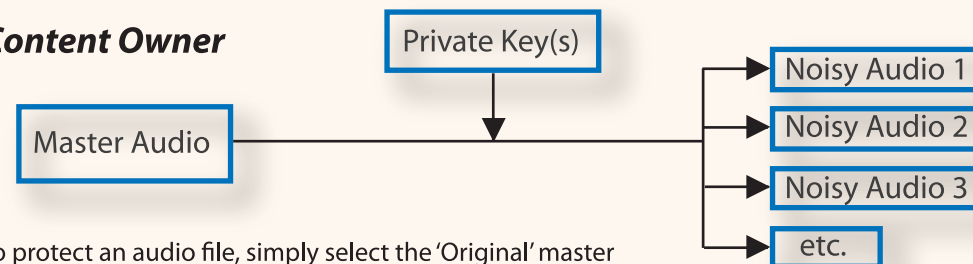
Post-release

The level of “noise” added is scalable and can therefore be adapted for promotional use. This allows to circulate the audio in a format that will allow one-off sharing if they choose this option, while discouraging repeated listening - prompting those who like it, to buy it!

Prototype Application



Content Owner



To protect an audio file, simply select the 'Original' master track, set 'Low' or 'High' for level of noise to be added and 'Add Noise'. A copy (or set of unique copies) of the master will then be made with noise added, a key (or set of unique keys) will be generated, to be distributed to authorised recipients.

Authorised Recipient



Authorised recipients remove the “noise” from marked audio by entering the appropriate private key for the chosen copy of the audio and simply clicking 'Remove Noise'. There are over 400 million possible key combinations.... for every track!

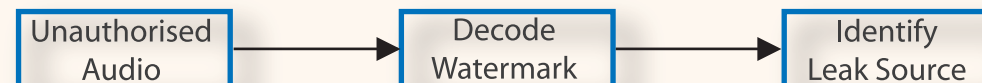
Using any key other than the key allocated to the selected copy of the audio will actually produce more “noisy” audio.

Unauthorised Recipient



When multiple copies of the audio are made, the 'key' is per copy, not per track. It is impossible for users to 'clean' the noise from a file without the correct key for their copy. This prevents recipients from 'cleaning' a copy belonging to another recipient or using their key on different audio.

Identifying Leaks



Control your releases
Create secure distribution for your inner circle
Tag pre-releases to media
Track unauthorised distribution

Both the flexibility and security of this technique are a result of the multiple parameters used to create the 'noise'. The content owner can chose multiple levels of 'noise' and the system will generate up to 400 million copies of the same audio before any two have the same noise.

Rather than noise being removed, leaving evidence that it had been present, it is instead 'cleaned'. This means it's addition is actually reversed. The difference is subtle but what it means is that there is no evidence that the noise ever existed. Unlike other watermarking techniques, in which the watermark is always present (whether perceptible or not), with this technology there is no trace of the 'noise' once it is removed, whether by wave analysis, statistical analysis or visual analysis.

Digital Noise Control, by digitalWEED is one of a suite of products at the Beta version phase of development.

We are actively seeking proactive forward-thinking partners in the music and entertainment industry to collaborate in building industry focused applications which address the many problems faced by content producers, owners and distributors.

Contact for General enquiries:

Ron Healy [r.healy@digitalWEED.ie]

Business/Web applications:

Dave Reid [d.reid@digitalWEED.ie]

Ger Meade [g.meade@digitalWEED.ie]

Technical queries:

Jian Wang [j.wang@digitalWEED.ie]

digitalweed.ie
info@digitalweed.ie



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