

# MP3 Sniffer: A System for Online Detecting MP3 Music Transmissions

劉志俊

Computer Science & Information Engineering

Computer Science and Informatics

ccliu@chu.edu.tw

## Abstract

In this paper, we describe a system for online detecting MP3 music transmissions. Packet mirroring technique is used for capturing the MP3 packets transmitted over the Internet. A multi-resolution local description for the captured MP3 fragment is computed for fast identifying and aligning possible tones within it. Four kinds of MP3 features, i.e., MDCT, MFCC, MPEG-7, and chroma vectors are extracted from the MP3 bitstreams for computing the MP3 fingerprints for further precisely matching. To efficiently search for an unknown MP3 fragment in the high dimensional feature space, an indexing scheme, which utilizes the PCA technique, the QUC-tree, and the MP3 signatures, is proposed. Experiments are performed on the RWC music database to show the robustness and efficiency of the proposed MP3 sniffer system.

Keyword : MP3, MP3 sniffer, MP3 packets, local description, audio fingerprints, MP3 signatures.