

Title (en)
Blind source separation for hearing aids

Title (de)
Blind-Trennung von Signalquellen für Hörhilfegeräte

Title (fr)
Séparation aveugle de sources pour prothèses auditives

Publication
EP 1017253 A2 20000705 (EN)

Application
EP 99310611 A 19991224

Priority
US 22348598 A 19981230

Abstract (en)
An electronic filtering device for performing real-time unmixing of a signal desired to be recovered by a user of the device, where the desired signal emanates from one of a plurality of independent signal sources. Two microphones positioned along a common axis develop first and second electrical input signals in response to reception by the microphones of acoustic signals from the plurality of independent signal sources. The common axis of the microphones is controllable in real time by the user to align the common axis so it points in the direction of the source of the desired signal. An adaptive unmixing signal processor responsive to the input signals develops output signals wherein the desired signal is separate from the mixture signal. A preprocessor may be provided to subject the input signals to one or both of a time delay processing and a decorrelation processing before their application to the unmixing signal processor, to enhance recovery of the desired signal. A selected output of the unmixing signal processor can be applied as an input to a speaker for reproduction, or can be further processed for signal enhancement by an additional processor before reproduction.

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IPC 8 full level
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CPC (source: EP)
H04R 25/405 (2013.01); **H04R 25/407** (2013.01); **H04R 25/507** (2013.01); **H04R 2225/43** (2013.01)

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