

Title (en)  
ELIMINATION OF NOISE FROM A SPEECH SIGNAL

Title (de)  
GERÄUSCHUNTERDRÜCKUNG AUS EINEM SPRACHSIGNAL

Title (fr)  
ELIMINATION DU BRUIT D'UN SIGNAL VOCAL

Publication  
**EP 1141949 A1 20011010 (EN)**

Application  
**EP 00979526 A 20001027**

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Abstract (en)  
[origin: WO0131640A1] A method for reducing noise in a noisy time-varying speech input signal  $y(k)$  includes receiving the input signal  $y(k)$  and deriving a plurality of spectral component signals representing respective magnitudes  $|Y(k)|$  of spectral components of the input signal  $y(k)$ . A correlation coefficient  $\gamma_{sn}$  is obtained which indicates a correlation in the spectral domain between a clean speech signal component  $s(k)$  and a noise signal component  $n(k)$  present in the input signal  $y(k)$  ( $y(k) = s(k) + n(k)$ ). Magnitudes of respective noise-suppressed spectral components  $\hat{S}(k)$  are estimated by solving a correlation equation which gives a relationship between the magnitudes of the respective spectral components  $|Y(k)|$  of the noisy input signal  $y(k)$ , the spectral components  $|S(k)|$  of the clean speech signal  $s(k)$ , and the spectral components  $|N(k)|$  of the noise signal  $n(k)$ , where the equation includes the correlation based on the obtained correlation coefficient  $\gamma_{sn}$ . Preferably, the correlation equation is given by  $|Y(k)|^2 = |S(k)|^2 + |N(k)|^2 + 2\gamma_{sn}|S(k)||N(k)|$ .

IPC 1-7  
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