

(54) Title of the invention : SYSTEM APPARATUS AND METHOD FOR CONSISTENT ACOUSTIC SCENE REPRODUCTION BASED ON ADAPTIVE FUNCTIONS

(51) International classification :H04S7/00,H04R25/00
 (31) Priority Document No :14167053.9
 (32) Priority Date :05/05/2014
 (33) Name of priority country :EPO
 (86) International Application No :PCT/EP2015/058857
 Filing Date :23/04/2015
 (87) International Publication No :WO 2015/169617
 (61) Patent of Addition to Application Number :NA
 Filing Date :NA
 (62) Divisional to Application Number :NA
 Filing Date :NA

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(57) Abstract :

A system for generating one or more audio output signals is provided. The system comprises a decomposition module (101) a signal processor (105) and an output interface (106). The signal processor (105) is configured to receive the direct component signal the diffuse component signal and direction information said direction information depending on a direction of arrival of the direct signal components of the two or more audio input signals. Moreover the signal processor (105) is configured to generate one or more processed diffuse signals depending on the diffuse component signal. For each audio output signal of the one or more audio output signals the signal processor (105) is configured to determine depending on the direction of arrival a direct gain the signal processor (105) is configured to apply said direct gain on the direct component signal to obtain a processed direct signal and the signal processor (105) is configured to combine said processed direct signal and one of the one or more processed diffuse signals to generate said audio output signal. The output interface (106) is configured to output the one or more audio output signals. The signal processor (105) comprises a gain function computation module (104) for calculating one or more gain functions wherein each gain function of the one or more gain functions comprises a plurality of gain function argument values wherein a gain function return value is assigned to each of said gain function argument values wherein when said gain function receives one of said gain function argument values wherein said gain function is configured to return the gain function return value being assigned to said one of said gain function argument values. Moreover the signal processor (105) further comprises a signal modifier (103) for selecting depending on the direction of arrival a direction dependent argument value from the gain function argument values of a gain function of the one or more gain functions for obtaining the gain function return value being assigned to said direction dependent argument value from said gain function and for determining the gain value of at least one of the one or more audio output signals depending on said gain function return value obtained from said gain function.



No. of Pages : 59 No. of Claims : 17