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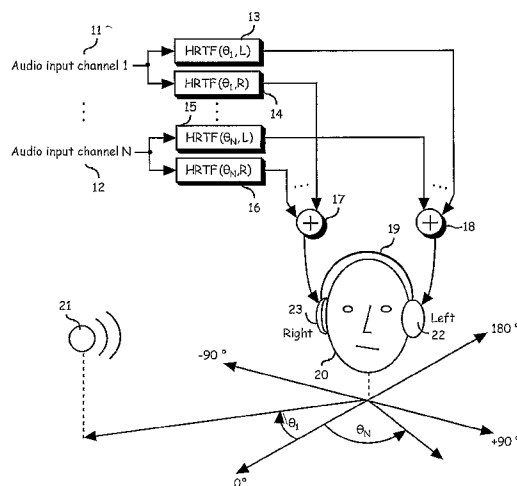
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(54) Title: IMPROVED HEAD RELATED TRANSFER FUNCTIONS FOR PANNED STEREO AUDIO CONTENT



(57) Abstract: A method to process audio signals, an apparatus accepting audio signals, a carrier medium that carried instructions for a processor to implement the method to process audio signals, and a carrier medium carrying filter data to implement a filter of audio signals. The method includes filtering a pair of audio input signals by a process that produces a pair of output signals corresponding to the results of: filtering each of the input signals with a HRTF filter pair, and adding the HRTF filtered signals. The HRTF filter pair is such that a listener listening to the pair of output signals through headphones experiences sounds from a pair of desired virtual speaker locations. Furthermore, the filtering is such that, in the case that the pair of audio input signals includes a panned signal component, the listener listening to the pair of output signals through headphones is provided with the sensation that the panned signal component emanates from a virtual sound source at a center location between the virtual speaker locations.