



7

Abstract

Conference system with automatic speaker detection and speaker unit for use in the conference system

- A conference system comprises speaker units (12) coupled to a central unit. The speaker unit (12) comprises an echo canceller (20) with an adaptive filter (38) having an impulse response of comparatively short duration. In a speech pause of the user of the speaker unit (12) the common listening signal (LS) of the conference system
- 5 is applied to the loudspeaker (18). Of the sounds then picked up by the microphone (16) only those sounds are compensated which are produced by the loudspeaker (18) and which reach the microphone (16) directly and which reach the microphone (16) indirectly *via* reflections from nearby objects. These sounds have a comparatively short impulse response time and enable a comparatively simple adaptive filter (38) to be used.
- 10 The other sounds picked up by the microphone (16) reach the microphone (16) *via* reflections from the walls of the conference space in which the conference system is situated. The other sounds have a comparatively long impulse response time. For the purpose of automatic speech detection these other sounds do not require echo cancellation because they are the same for all the speaker units. Automatic speech
- 15 detection is now effected if the signal strength of the compensated microphone signal (MCCS) produced by the echo canceller (20) exceeds the average signal level of the speaker units.

(Figure 2)