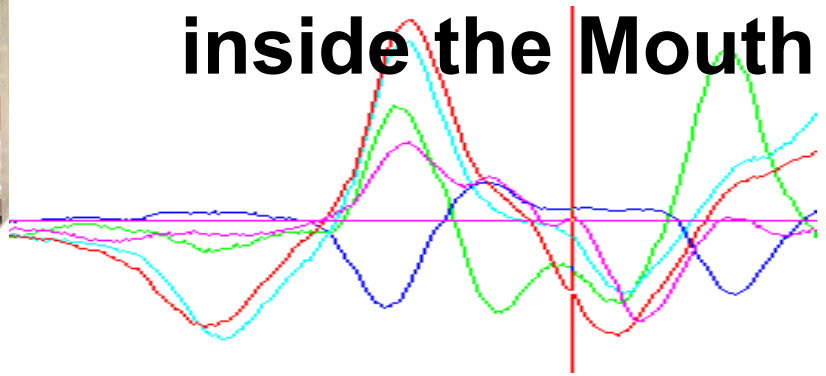


3D-Recording of Speech- Movement inside the Mouth



3D-Articulograph AG500 Research and clinical application

Until recently, the study of speech movement has been hindered by the inaccessibility of the oral cavity during speech. X-ray techniques, although theoretically possible, are generally inapplicable, because of the unacceptable radiation exposure. For many scientists, the Articulograph AG100, designed by our company, represents a solution to this problem. This system is based on the principle of inductive distance measurement. The AG500, which is our latest development, enables the 3-dimensional recording and visualisation of speech-movements inside the mouth.

The digitally recorded data enables the researching of the scientific foundations of speech movement in physiology and pathophysiology. New possibilities are opened up in cases of speech movement research- .. Complete new possibilities now exist for studies on the neuronal organisation of speech movements, on theoretical models of the vocal tract, on speech synthesis and analysis and on the entire field of experimental phonetics. The 3D-Articulograph AG500 is a sufficient instrument for research.

3D-Articulograph AG500 Chose any measuring points, receive precise results

A brand-new, patented procedure allows the individuals being tested to freely move their head in the measurement area. Any number of sensors can be attached in any desired positions and in all directions, inside the sphere of measurement of 300mm. The positions of the sensors are visualised digitally by **three co-ordinates (x; y; z) and two direction angles (phi; theta)**. Head motions, unrelated to speech movements, will be compensated. This way, only the motions of articulations are stored. Inside the spherical 300 mm measuring space, the measuring data is recorded within **high accuracy and time-related resolution**. Beside of the visualisation of speech movements, the AG500 can be used for all applications where movements cannot be followed adequately by other methods. For example, grasping movements of the human hand or other motions can be visualised.

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