Symbol	Typ	Titel
G	**Sektion**	**PHYSICS**
G10	**Klasse**	**MUSICAL INSTRUMENTS; ACOUSTICS**
G10L	**Unterklasse**	**SPEECH ANALYSIS OR SYNTHESIS; SPEECH RECOGNITION (sound input/output for computers G06F 3/16; digital data processing methods or equipment specially adapted for handling natural language data G06F 17/20; teaching or communicating with the blind, deaf or mute G09B 21/00; telephonic communication H04M) [4]**
G10L 3/00	Gelöscht	(transferred to G10L 11/00; to ; G10L 11/06; G10L 13/04; G10L 15/04; G10L 17/00)
G10L 3/02	Gelöscht	(transferred to G10L 21/00; to ; G10L 21/04)
G10L 5/00	Gelöscht	(transferred to G10L 13/00; G10L 15/00; G10L 17/00)
G10L 5/02	Gelöscht	(transferred to G10L 13/00; to ; G10L 13/08)
G10L 5/04	Gelöscht	(transferred to G10L 13/00; to ; G10L 13/08)
G10L 5/06	Gelöscht	(transferred to G10L 15/00; to ; G10L 17/00)
G10L 7/00	Gelöscht	(transferred to G10L 13/00; G10L 15/00; G10L 17/00; G10L 19/02)
G10L 7/02	Gelöscht	(transferred to G10L 13/02; G10L 19/02)
G10L 7/06	Gelöscht	(transferred to G10L 13/02; G10L 19/02)
G10L 7/08	Gelöscht	(transferred to G10L 15/00; to ; G10L 17/00)
G10L 7/10	Gelöscht	(transferred to G10L 21/06)
G10L 9/00	Gelöscht	(transferred to G10L 15/02; G10L 15/08; G10L 15/16; G10L 19/02)
G10L 9/04	Gelöscht	(transferred to G10L 15/02; G10L 15/08; G10L 15/16; G10L 19/02)
G10L 9/06	Gelöscht	(transferred to G10L 15/00; to ; G10L 17/00)
G10L 9/08	Gelöscht	(transferred to G10L 11/00; to ; G10L 21/06)
G10L 9/12	Gelöscht	(transferred to G10L 11/00; to ; G10L 21/06)
G10L 9/14	Gelöscht	(transferred to G10L 13/00; to ; G10L 17/00; G10L 19/04; to ; G10L 19/14; G10L 21/00; to ; G10L 21/06)
G10L 9/16	Gelöscht	(transferred to G10L 11/00; to ; G10L 21/06)
G10L 9/18	Gelöscht	(transferred to G10L 11/00; to ; G10L 21/06)
G10L 9/20	Gelöscht	(transferred to G10L 15/24)
G10L 11/00	***Hauptgruppe***	***Determination or detection of speech characteristics not restricted to a single one of groups G10L 15/00 to G10L 21/00 [7]***
G10L 11/02	*1-Punkt Untergruppe*	*. Detection of presence or absence of speech signals (switching of direction of transmission by voice frequency in two-way loud-speaking telephone systems H04M 9/10) [7]*
G10L 11/04	*1-Punkt Untergruppe*	*. Pitch determination of speech signals [7]*
G10L 11/06	*1-Punkt Untergruppe*	*. Discriminating between voiced and unvoiced parts of speech signals (G10L 11/04 takes precedence) [7]*
G10L 13/00	***Hauptgruppe***	***Speech synthesis ; Text to speech systems (electrophonic musical instruments G10H) [7]***
G10L 13/02	*1-Punkt Untergruppe*	*. Methods for producing synthetic speech ; Speech synthesisers [7]*
G10L 13/04	*2-Punkt Untergruppe*	*. . Details of speech synthesis systems, e.g. synthesiser structure, memory management [7]*
G10L 13/06	*1-Punkt Untergruppe*	*. Elementary speech units used in speech synthesisers ; Concatenation rules [7]*
G10L 13/08	*1-Punkt Untergruppe*	*. Text analysis or generation of parameters for speech synthesis out of text, e.g. grapheme to phoneme translation, prosody generation, stress or intonation determination [7]*
G10L 15/00	***Hauptgruppe***	***Speech recognition (G10L 17/00 takes precedence) [7]***
G10L 15/02	*1-Punkt Untergruppe*	*. Feature extraction for speech recognition ; Selection of recognition unit [7]*
G10L 15/04	*1-Punkt Untergruppe*	*. Segmentation or word limit detection [7]*
G10L 15/06	*1-Punkt Untergruppe*	*. Creation of reference templates ; Training of speech recognition systems, e.g. adaptation to the characteristics of the speaker's voice (G10L 15/14 takes precedence) [7]*

Symbol	Typ	Titel
G10L 15/08	*1-Punkt Untergruppe*	*. Speech classification or search (pattern recognition G06K 9/00) [7]*
G10L 15/10	*2-Punkt Untergruppe*	*. . using distance or distortion measures between unknown speech and reference templates [7]*
G10L 15/12	*2-Punkt Untergruppe*	*. . using dynamic programming techniques, e.g. Dynamic Time Warping (DTW) [7]*
G10L 15/14	*2-Punkt Untergruppe*	*. . using statistical models, e.g. Hidden Markov Models (HMM) (G10L 15/18 takes precedence) [7]*
G10L 15/16	*2-Punkt Untergruppe*	*. . using artificial neural networks [7]*
G10L 15/18	*2-Punkt Untergruppe*	*. . using natural language modelling [7]*
G10L 15/20	*1-Punkt Untergruppe*	*. Speech recognition techniques specially adapted for robustness in adverse environments, e.g. in noise, of stress induced speech (G10L 21/02 takes precedence) [7]*
G10L 15/22	*1-Punkt Untergruppe*	*. Procedures used during a speech recognition process, e.g. man-machine dialog [7]*
G10L 15/24	*1-Punkt Untergruppe*	*. Speech recognition using non-acoustical features, e.g. position of the lips [7]*
G10L 15/26	*1-Punkt Untergruppe*	*. Speech to text systems (G10L 15/08 takes precedence) [7]*
G10L 15/28	*1-Punkt Untergruppe*	*. Constructional details of speech recognition systems [7]*
G10L 17/00	***Hauptgruppe***	***Speaker identification or verification [7]***
G10L 19/00	***Hauptgruppe***	***Speech analysis-synthesis techniques for redundancy reduction, e.g. in vocoders ; Coding or decoding of speech [7]***
G10L 19/02	*1-Punkt Untergruppe*	*. using spectral analysis, e.g. transform vocoders, subband vocoders [7]*
G10L 19/04	*1-Punkt Untergruppe*	*. using predictive techniques [7]*
G10L 19/06	*2-Punkt Untergruppe*	*. . Determination or coding of the spectral characteristics, e.g. of the short term prediction coefficients [7]*
G10L 19/08	*2-Punkt Untergruppe*	*. . Determination or coding of the excitation function ; Determination or coding of the long-term prediction parameters [7]*
G10L 19/10	*3-Punkt Untergruppe*	*. . . Determination or coding of a multipulse excitation [7]*
G10L 19/12	*3-Punkt Untergruppe*	*. . . Determination or coding of a code excitation, e.g. in code excited linear prediction (CELP) vocoders [7]*
G10L 19/14	*2-Punkt Untergruppe*	*. . Details not provided for in groups G10L 19/06 to G10L 19/12 , e.g. gain coding, post filtering design, vocoder structure [7]*
G10L 21/00	***Hauptgruppe***	***Processing of the speech signal to produce another audible or non-audible signal, e.g. visual, tactile, in order to modify its quality or its intelligibility (G10L 19/00 takes precedence) [7]***
G10L 21/02	*1-Punkt Untergruppe*	*. Speech enhancement, e.g. noise reduction, echo cancellation (echo suppression in hand-free telephones H04M 9/08 ; hearing aids H04R 25/00) [7]*
G10L 21/04	*1-Punkt Untergruppe*	*. Time compression or expansion [7]*
G10L 21/06	*1-Punkt Untergruppe*	*. Transformation of speech into a non-audible representation, e.g. speech visualisation, speech processing for tactile aids (G10L 15/26 takes precedence) [7]*
		Indexing scheme associated with groups G10L 11/00 to G10L 21/00 , relating to speech signal processing or feature extraction. The indexing codes should be unlinked. [7]
G10L 101/00	***Hauptgruppe***	***Signal processing or feature extraction methods applied in speech analysis, synthesis or recognition [7]***
G10L 101/02	*1-Punkt Untergruppe*	*. Spectral analysis [7]*
G10L 101/023	*2-Punkt Untergruppe*	*. . using filter banks [7]*
G10L 101/027	*2-Punkt Untergruppe*	*. . using Fourier or Walsh transformation [7]*

Symbol	Typ	Titel
G10L 101/04	*1-Punkt Untergruppe*	*. Cepstral analysis [7]*
G10L 101/06	*1-Punkt Untergruppe*	*. Waveform coding [7]*
G10L 101/065	*2-Punkt Untergruppe*	*. . Energy determination [7]*
G10L 101/08	*1-Punkt Untergruppe*	*. Zero crossing rate [7]*
G10L 101/10	*1-Punkt Untergruppe*	*. Vector quantisation [7]*
G10L 101/12	*1-Punkt Untergruppe*	*. Predictive techniques, e.g. linear prediction [7]*
G10L 101/14	*1-Punkt Untergruppe*	*. Correlation techniques [7]*
G10L 101/16	*1-Punkt Untergruppe*	*. Orthogonal transformations, e.g. wavelets (G10L 101/027 takes precedence) [7]*
G10L 101/18	*1-Punkt Untergruppe*	*. Techniques based on formant identification [7]*
G10L 101/20	*1-Punkt Untergruppe*	*. Techniques based on simulation of the vocal or the aural systems [7]*