

Symbol	Typ	Titel
G	Sektion	PHYSICS
G10	Klasse	MUSICAL INSTRUMENTS; ACOUSTICS
G10L	Unterkategorie	SPEECH ANALYSIS OR SYNTHESIS; SPEECH RECOGNITION; SPEECH OR VOICE PROCESSING; SPEECH OR AUDIO CODING OR DECODING [4]
G10L 13/00	Hauptgruppe	Speech synthesis; Text to speech systems [7, 2006.01]
G10L 13/02	1-Punkt Untergruppe	. Methods for producing synthetic speech; Speech synthesisers [7, 2006.01, 2013.01]
G10L 13/027	2-Punkt Untergruppe	.. Concept to speech synthesisers; Generation of natural phrases from machine-based concepts (generation of parameters for speech synthesis out of text G10L 13/08) [2013.01]
G10L 13/033	2-Punkt Untergruppe	... Voice editing, e.g. manipulating the voice of the synthesiser [2013.01]
G10L 13/04	2-Punkt Untergruppe	... Details of speech synthesis systems, e.g. synthesiser structure or memory management [7, 2006.01, 2013.01]
G10L 13/047	3-Punkt Untergruppe	... Architecture of speech synthesisers [2013.01]
G10L 13/06	1-Punkt Untergruppe	. Elementary speech units used in speech synthesisers; Concatenation rules [7, 2006.01, 2013.01]
G10L 13/07	2-Punkt Untergruppe	.. Concatenation rules [2013.01]
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 or stress or intonation determination [7, 2006.01, 2013.01]
G10L 13/10	2-Punkt Untergruppe	.. Prosody rules derived from text; Stress or intonation [2013.01]
G10L 15/00	Hauptgruppe	Speech recognition (G10L 17/00 takes precedence) [7, 2006.01, 2013.01]
G10L 15/01	1-Punkt Untergruppe	. Assessment or evaluation of speech recognition systems [2013.01]
G10L 15/02	1-Punkt Untergruppe	. Feature extraction for speech recognition; Selection of recognition unit [7, 2006.01]
G10L 15/04	1-Punkt Untergruppe	. Segmentation; Word boundary detection [7, 2006.01, 2013.01]
G10L 15/05	2-Punkt Untergruppe	.. Word boundary detection [2013.01]
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, 2006.01, 2013.01]
G10L 15/065	2-Punkt Untergruppe	.. Adaptation [2013.01]
G10L 15/07	3-Punkt Untergruppe	... to the speaker [2013.01]
G10L 15/08	1-Punkt Untergruppe	. Speech classification or search [7, 2006.01]
G10L 15/10	2-Punkt Untergruppe	.. using distance or distortion measures between unknown speech and reference templates [7, 2006.01]
G10L 15/12	2-Punkt Untergruppe	.. using dynamic programming techniques, e.g. dynamic time warping [DTW] [7, 2006.01]
G10L 15/14	2-Punkt Untergruppe	.. using statistical models, e.g. Hidden Markov Models [HMM] (G10L 15/18 takes precedence) [7, 2006.01]
G10L 15/16	2-Punkt Untergruppe	.. using artificial neural networks [7, 2006.01]
G10L 15/18	2-Punkt Untergruppe	.. using natural language modelling [7, 2006.01, 2013.01]
G10L 15/183	3-Punkt Untergruppe	... using context dependencies, e.g. language models [2013.01]
G10L 15/187	4-Punkt Untergruppe Phonemic context, e.g. pronunciation rules, phonotactical constraints or phoneme n-grams [2013.01]

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G10L 15/19	4-Punkt Untergruppe Grammatical context, e.g. disambiguation of recognition hypotheses based on word sequence rules [2013.01]
G10L 15/193	5-Punkt Untergruppe	.... Formal grammars, e.g. finite state automata, context free grammars or word networks [2013.01]
G10L 15/197	5-Punkt Untergruppe	.... Probabilistic grammars, e.g. word n-grams [2013.01]
G10L 15/20	1-Punkt Untergruppe	. Speech recognition techniques specially adapted for robustness in adverse environments, e.g. in noise or of stress induced speech (G10L 21/02 takes precedence) [7, 2006.01]
G10L 15/22	1-Punkt Untergruppe	. Procedures used during a speech recognition process, e.g. man-machine dialog [7, 2006.01]
G10L 15/24	1-Punkt Untergruppe	. Speech recognition using non-acoustical features [7, 2006.01, 2013.01]
G10L 15/25	2-Punkt Untergruppe	.. using position of the lips, movement of the lips or face analysis [2013.01]
G10L 15/26	1-Punkt Untergruppe	. Speech to text systems (G10L 15/08 takes precedence) [7, 2006.01]
G10L 15/28	1-Punkt Untergruppe	. Constructional details of speech recognition systems [7, 2006.01, 2013.01]
G10L 15/30	2-Punkt Untergruppe	.. Distributed recognition, e.g. in client-server systems, for mobile phones or network applications [2013.01]
G10L 15/32	2-Punkt Untergruppe	.. Multiple recognisers used in sequence or in parallel; Score combination systems therefor, e.g. voting systems [2013.01]
G10L 15/34	2-Punkt Untergruppe	.. Adaptation of a single recogniser for parallel processing, e.g. by use of multiple processors or cloud computing [2013.01]
G10L 17/00	Hauptgruppe	Speaker identification or verification [7, 2006.01, 2013.01]
G10L 17/02	1-Punkt Untergruppe	. Preprocessing operations, e.g. segment selection; Pattern representation or modelling, e.g. based on linear discriminant analysis [LDA] or principal components; Feature selection or extraction [2013.01]
G10L 17/04	1-Punkt Untergruppe	. Training, enrolment or model building [2013.01]
G10L 17/06	1-Punkt Untergruppe	. Decision making techniques; Pattern matching strategies [2013.01]
G10L 17/08	2-Punkt Untergruppe	.. Use of distortion metrics or a particular distance between probe pattern and reference templates [2013.01]
G10L 17/10	2-Punkt Untergruppe	.. Multimodal systems, i.e. based on the integration of multiple recognition engines or fusion of expert systems [2013.01]
G10L 17/12	2-Punkt Untergruppe	.. Score normalisation [2013.01]
G10L 17/14	2-Punkt Untergruppe	.. Use of phonemic categorisation or speech recognition prior to speaker recognition or verification [2013.01]
G10L 17/16	1-Punkt Untergruppe	. Hidden Markov models [HMMs] [2013.01]
G10L 17/18	1-Punkt Untergruppe	. Artificial neural networks; Connectionist approaches [2013.01]
G10L 17/20	1-Punkt Untergruppe	. Pattern transformations or operations aimed at increasing system robustness, e.g. against channel noise or different working conditions [2013.01]
G10L 17/22	1-Punkt Untergruppe	. Interactive procedures; Man-machine interfaces [2013.01]
G10L 17/24	2-Punkt Untergruppe	.. the user being prompted to utter a password or a predefined phrase [2013.01]
G10L 17/26	1-Punkt Untergruppe	. Recognition of special voice characteristics, e.g. for use in lie detectors; Recognition of animal voices [2013.01]
G10L 19/00	Hauptgruppe	Speech or audio signal analysis-synthesis techniques for redundancy reduction, e.g. in vocoders; Coding or decoding of speech or audio signals, using source filter models or psychoacoustic analysis (in musical instruments G10H) [7, 2006.01, 2013.01]
G10L 19/002	1-Punkt Untergruppe	. Dynamic bit allocation (for perceptual audio coders G10L 19/032) [2013.01]

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G10L 19/005	1-Punkt Untergruppe	. Correction of errors induced by the transmission channel, if related to the coding algorithm [2013.01]
G10L 19/008	1-Punkt Untergruppe	. Multichannel audio signal coding or decoding using interchannel correlation to reduce redundancy, e.g. joint-stereo, intensity-coding or matrixing [2013.01]
G10L 19/012	1-Punkt Untergruppe	. Comfort noise or silence coding [2013.01]
G10L 19/018	1-Punkt Untergruppe	. Audio watermarking, i.e. embedding inaudible data in the audio signal [2013.01]
G10L 19/02	1-Punkt Untergruppe	. using spectral analysis, e.g. transform vocoders or subband vocoders [7, 2006.01, 2013.01]
G10L 19/022	2-Punkt Untergruppe	.. Blocking, i.e. grouping of samples in time; Choice of analysis windows; Overlap factoring [2013.01]
G10L 19/025	3-Punkt Untergruppe	... Detection of transients or attacks for time/frequency resolution switching [2013.01]
G10L 19/028	2-Punkt Untergruppe	.. Noise substitution, e.g. substituting non-tonal spectral components by noisy source (comfort noise for discontinuous speech transmission G10L 19/012) [2013.01]
G10L 19/03	2-Punkt Untergruppe	.. Spectral prediction for preventing pre-echo; Temporary noise shaping [TNS], e.g. in MPEG2 or MPEG4 [2013.01]
G10L 19/032	2-Punkt Untergruppe	.. Quantisation or dequantisation of spectral components [2013.01]
G10L 19/035	3-Punkt Untergruppe	... Scalar quantisation [2013.01]
G10L 19/038	3-Punkt Untergruppe	... Vector quantisation, e.g. TwinVQ audio [2013.01]
G10L 19/04	1-Punkt Untergruppe	. using predictive techniques [7, 2006.01, 2013.01]
G10L 19/06	2-Punkt Untergruppe	.. Determination or coding of the spectral characteristics, e.g. of the short-term prediction coefficients [7, 2006.01, 2013.01]
G10L 19/07	3-Punkt Untergruppe	... Line spectrum pair [LSP] vocoders [2013.01]
G10L 19/08	2-Punkt Untergruppe	.. Determination or coding of the excitation function; Determination or coding of the long-term prediction parameters [7, 2006.01, 2013.01]
G10L 19/083	3-Punkt Untergruppe	... the excitation function being an excitation gain (G10L 25/90 takes precedence) [2013.01]
G10L 19/087	3-Punkt Untergruppe	... using mixed excitation models, e.g. MELP, MBE, split band LPC or HVXC [2013.01]
G10L 19/09	3-Punkt Untergruppe	... Long term prediction, i.e. removing periodical redundancies, e.g. by using adaptive codebook or pitch predictor [2013.01]
G10L 19/093	3-Punkt Untergruppe	... using sinusoidal excitation models [2013.01]
G10L 19/097	3-Punkt Untergruppe	... using prototype waveform decomposition or prototype waveform interpolative [PWI] coders [2013.01]
G10L 19/10	3-Punkt Untergruppe	... the excitation function being a multipulse excitation [7, 2006.01, 2013.01]
G10L 19/107	4-Punkt Untergruppe	.... Sparse pulse excitation, e.g. by using algebraic codebook [2013.01]
G10L 19/113	4-Punkt Untergruppe	.... Regular pulse excitation [2013.01]
G10L 19/12	3-Punkt Untergruppe	... the excitation function being a code excitation, e.g. in code excited linear prediction [CELP] vocoders [7, 2006.01, 2013.01]
G10L 19/125	4-Punkt Untergruppe	.... Pitch excitation, e.g. pitch synchronous innovation CELP [PSI-CELP] [2013.01]
G10L 19/13	4-Punkt Untergruppe	.... Residual excited linear prediction [RELP] [2013.01]
G10L 19/135	4-Punkt Untergruppe Vector sum excited linear prediction [VSELP] [2013.01]

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G10L 19/16	2-Punkt Untergruppe	... Vocoder architecture [2013.01]
G10L 19/18	3-Punkt Untergruppe	... Vcoders using multiple modes [2013.01]
G10L 19/20	4-Punkt Untergruppe	.... using sound class specific coding, hybrid encoders or object based coding [2013.01]
G10L 19/22	4-Punkt Untergruppe	.... Mode decision, i.e. based on audio signal content versus external parameters [2013.01]
G10L 19/24	4-Punkt Untergruppe	.... Variable rate codecs, e.g. for generating different qualities using a scalable representation such as hierarchical encoding or layered encoding [2013.01]
G10L 19/26	2-Punkt Untergruppe	... Pre-filtering or post-filtering [2013.01]
G10L 21/00	Hauptgruppe	Processing of the speech or voice signal to produce another audible or non-audible signal, e.g. visual or tactile, in order to modify its quality or its intelligibility (G10L 19/00 takes precedence) [7, 2006.01, 2013.01]
G10L 21/003	1-Punkt Untergruppe	. Changing voice quality, e.g. pitch or formants [2013.01]
G10L 21/007	2-Punkt Untergruppe	... characterised by the process used [2013.01]
G10L 21/01	3-Punkt Untergruppe	... Correction of time axis [2013.01]
G10L 21/013	3-Punkt Untergruppe	... Adapting to target pitch [2013.01]
G10L 21/02	1-Punkt Untergruppe	. Speech enhancement, e.g. noise reduction or echo cancellation (reducing echo effects in line transmission systems H04B 3/20; echo suppression in hands-free telephones H04M 9/08) [7, 2006.01, 2013.01]
G10L 21/0208	2-Punkt Untergruppe	... Noise filtering [2013.01]
G10L 21/0216	3-Punkt Untergruppe	... characterised by the method used for estimating noise [2013.01]
G10L 21/0224	4-Punkt Untergruppe	.... Processing in the time domain [2013.01]
G10L 21/0232	4-Punkt Untergruppe	.... Processing in the frequency domain [2013.01]
G10L 21/0264	3-Punkt Untergruppe	... characterised by the type of parameter measurement, e.g. correlation techniques, zero crossing techniques or predictive techniques [2013.01]
G10L 21/0272	2-Punkt Untergruppe	... Voice signal separating [2013.01]
G10L 21/028	3-Punkt Untergruppe	... using properties of sound source [2013.01]
G10L 21/0308	3-Punkt Untergruppe	... characterised by the type of parameter measurement, e.g. correlation techniques, zero crossing techniques or predictive techniques [2013.01]
G10L 21/0316	2-Punkt Untergruppe	... by changing the amplitude [2013.01]
G10L 21/0324	3-Punkt Untergruppe	... Details of processing therefor [2013.01]
G10L 21/0332	4-Punkt Untergruppe	.... involving modification of waveforms [2013.01]
G10L 21/034	4-Punkt Untergruppe	.... Automatic adjustment [2013.01]
G10L 21/0356	3-Punkt Untergruppe	... for synchronising with other signals, e.g. video signals [2013.01]
G10L 21/0364	3-Punkt Untergruppe	... for improving intelligibility [2013.01]
G10L 21/038	2-Punkt Untergruppe	... using band spreading techniques [2013.01]
G10L 21/0388	3-Punkt Untergruppe	... Details of processing therefor [2013.01]
G10L 21/04	1-Punkt Untergruppe	. Time compression or expansion [7, 2006.01, 2013.01]

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G10L 21/043	2-Punkt Untergruppe	... by changing speed [2013.01]
G10L 21/045	3-Punkt Untergruppe	... using thinning out or insertion of a waveform [2013.01]
G10L 21/047	4-Punkt Untergruppe	.... characterised by the type of waveform to be thinned out or inserted [2013.01]
G10L 21/049	4-Punkt Untergruppe	.... characterised by the interconnection of waveforms [2013.01]
G10L 21/055	2-Punkt Untergruppe	... for synchronising with other signals, e.g. video signals [2013.01]
G10L 21/057	2-Punkt Untergruppe	... for improving intelligibility [2013.01]
G10L 21/06	1-Punkt Untergruppe	. Transformation of speech into a non-audible representation, e.g. speech visualisation or speech processing for tactile aids (G10L 15/26 takes precedence) [7, 2006.01, 2013.01]
G10L 21/10	2-Punkt Untergruppe	.. Transforming into visible information [2013.01]
G10L 21/12	3-Punkt Untergruppe	... by displaying time domain information [2013.01]
G10L 21/14	3-Punkt Untergruppe	... by displaying frequency domain information [2013.01]
G10L 21/16	2-Punkt Untergruppe	.. Transforming into a non-visible representation (devices or methods enabling ear patients to replace direct auditory perception by another kind of perception A61F 11/04) [2013.01]
G10L 21/18	2-Punkt Untergruppe	.. Details of the transformation process [2013.01]
G10L 25/00	Hauptgruppe	Speech or voice analysis techniques not restricted to a single one of groups G10L 15/00-G10L 21/00 (muting semiconductor-based amplifiers when some special characteristics of a signal are sensed by a speech detector, e.g. sensing when no signal is present, H03G 3/34) [2013.01]
G10L 25/03	1-Punkt Untergruppe	. characterised by the type of extracted parameters [2013.01]
G10L 25/06	2-Punkt Untergruppe	.. the extracted parameters being correlation coefficients [2013.01]
G10L 25/09	2-Punkt Untergruppe	.. the extracted parameters being zero crossing rates [2013.01]
G10L 25/12	2-Punkt Untergruppe	.. the extracted parameters being prediction coefficients [2013.01]
G10L 25/15	2-Punkt Untergruppe	.. the extracted parameters being formant information [2013.01]
G10L 25/18	2-Punkt Untergruppe	.. the extracted parameters being spectral information of each sub-band [2013.01]
G10L 25/21	2-Punkt Untergruppe	.. the extracted parameters being power information [2013.01]
G10L 25/24	2-Punkt Untergruppe	.. the extracted parameters being the cepstrum [2013.01]
G10L 25/27	1-Punkt Untergruppe	. characterised by the analysis technique [2013.01]
G10L 25/30	2-Punkt Untergruppe	.. using neural networks [2013.01]
G10L 25/33	2-Punkt Untergruppe	.. using fuzzy logic [2013.01]
G10L 25/36	2-Punkt Untergruppe	.. using chaos theory [2013.01]
G10L 25/39	2-Punkt Untergruppe	.. using genetic algorithms [2013.01]
G10L 25/45	1-Punkt Untergruppe	. characterised by the type of analysis window [2013.01]
G10L 25/48	1-Punkt Untergruppe	. specially adapted for particular use [2013.01]
G10L 25/51	2-Punkt Untergruppe	.. for comparison or discrimination [2013.01]
G10L 25/54	3-Punkt Untergruppe	... for retrieval [2013.01]

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G10L 25/57	3-Punkt Untergruppe	... for processing of video signals [2013.01]
G10L 25/60	3-Punkt Untergruppe	... for measuring the quality of voice signals [2013.01]
G10L 25/63	3-Punkt Untergruppe	... for estimating an emotional state [2013.01]
G10L 25/66	3-Punkt Untergruppe	... for extracting parameters related to health condition (detecting or measuring for diagnostic purposes A61B 5/00) [2013.01]
G10L 25/69	2-Punkt Untergruppe	... for evaluating synthetic or decoded voice signals [2013.01]
G10L 25/72	2-Punkt Untergruppe	... for transmitting results of analysis [2013.01]
G10L 25/75	1-Punkt Untergruppe	. for modelling vocal tract parameters [2013.01]
G10L 25/78	1-Punkt Untergruppe	. Detection of presence or absence of voice signals (switching of direction of transmission by voice frequency in two-way loud-speaking telephone systems H04M 9/10) [2013.01]
G10L 25/81	2-Punkt Untergruppe	... for discriminating voice from music [2013.01]
G10L 25/84	2-Punkt Untergruppe	... for discriminating voice from noise [2013.01]
G10L 25/87	2-Punkt Untergruppe	... Detection of discrete points within a voice signal [2013.01]
G10L 25/90	1-Punkt Untergruppe	. Pitch determination of speech signals [2013.01]
G10L 25/93	1-Punkt Untergruppe	. Discriminating between voiced and unvoiced parts of speech signals (G10L 25/90 takes precedence) [2013.01]
G10L 99/00	Hauptgruppe	Subject matter not provided for in other groups of this subclass [2013.01]