United States District Court,
S.D. California.

LUCENT TECHNOLOGIES, INC,
Plaintiff.
v.
GATEWAY, INC. and Gateway Country Stores LLC; and, Microsoft Corporation; and, Dell, Inc,
Defendants.

Civil Nos. 02CV2060-B(LAB), 03CV0699-B(LAB), 03CV1108-B(LAB)

April 14, 2004.

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Joseph A. Micallef, Scott M. Border, John L. Newby, Arnold and Porter LLP, Washington, DC, Ryan M. Nishimoto, Arnold & Porter LLP, Los Angeles, CA, for Dell, Inc.

ORDER CONSTRUING CLAIMS FOR UNITED STATES PATENT NUMBER RE. 36,714

RUDI M. BREWSTER, **District Judge.**

Before the Court is the matter of claims construction for U.S. Patent Number RE. 36,714 ("the Brandenburg '714 Patent") in the above titled cases for patent infringement. FN1 Pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996), the Court conducted a Markman hearing regarding construction of the disputed claim terms for the Brandenburg '714 Patent on March 23, 2004. Plaintiff Lucent Technologies, Inc. ("Lucent") was represented by the Kirkland & Ellis law firm, Defendant Gateway Inc. ("Gateway") was represented by the Dewey Ballantine law firm, Defendant Microsoft Corporation ("Microsoft") was represented by the law firm of Fish and Richardson and Defendant Dell, Inc. ("Dell") was represented by the Arnold and Porter law firm. FN2

FN1. Lucent originally filed two separate patent infringement actions, one against Defendant Gateway (02CV2060), and a second against Defendant Dell (03CV1108). Microsoft intervened in the action filed by Lucent against Gateway. Microsoft also filed a declaratory judgment action against Lucent (03CV0699) and Lucent filed counterclaims for patent infringement against Microsoft in that action. On July 7, 2003, the Court entered an order consolidating these three cases. There are a total of 15 different patents involved in these three cases collectively.

FN2. The Brandenburg '714 Patent is not asserted against Defendant Dell and/or Gateway. Nevertheless, those parties were represented by counsel during the Markman hearing of this patent.

The purpose of the Markman hearing was for the Court, with the assistance of the parties, to prepare jury instructions interpreting the pertinent claims for all claim terms at issue in the Brandenburg '714 Patent. Additionally, the Court and the parties prepared a "case glossary" for terms found in the claims and the specification for the Brandenburg '714 Patent, considered to be technical in nature and which a jury of laypersons would not understand clearly without specific definition. As the case advances, the parties may request additional terms to be added to the glossary as to further facilitate the jury's understanding of the disputed claims.

After careful consideration of the parties' arguments and the applicable statues and case law, the Court **HEREBY CONSTRUES** all claim terms in dispute in the Brandenburg '714 Patent and ISSUES the relevant jury instructions as written in exhibit A, attached hereto. Further, the Court **HEREBY DEFINES** all pertinent technical terms as written in exhibit B, attached hereto.

IT IS SO ORDERED

EXHIBIT A-Brandenburg '714 Patent

VERBATIM CLAIMS LANGUAGE	***COURT'S CLAIM CONSTRUCTION***
Claim 1	
A method of processing an ordered time sequence of audio signals partitioned into contiguous blocks of samples, each such block having a discrete short-time spectrum, $S(W_i)$, 1=1,2, ..., N, for each of said blocks, comprising	A method of processing an ordered time **sequence** [succession] of **audio signals** [sound signals] partitioned into contiguous blocks of samples, each such block having a **discrete short-time spectrum** [a distinct, non-continuous set of amplitudes and/or phases of the frequency components that make up the sound signal], $S(w_i)$, I=1,2, ..., N [a mathematical notation for a set of frequency lines in the discrete short-time spectrum, where w_i is a frequency], for each of said blocks, comprising
	"Frequency" means number of cycles per unit of time.
predicting, for each block of *audio signals,* an estimate of the values for each $S(w_i)$ based on the values for $S(w_i)$ for one or more prior blocks,	predicting, for each block of audio signals, an estimate of the values for each $S(w_i)$ [a mathematical notation for a frequency line in the discrete short-time spectrum] based on the values for $S(w_i)$ for one or more prior blocks,
determining for each frequency, w_i, a randomness metric based on the predicted value for each $S(w_i)$ and the actual value for $S(w_i)$ for each block,	determining for each frequency, w_i, a **randomness metric** [a measure of randomness] based on the predicted value for each $S(w_i)$ and the actual value for $S(w_i)$ for each block,
based on said randomness metrics, and the distribution of power with frequency in the block,	based on said randomness metrics, and the distribution of power with frequency in the block, determining the value of **a tonality function** [a function that reflects the tone-like or noise-like nature of a signal] as a

determining the value of a tonality function as a function of frequency, and	function of frequency, and
based on said tonality function, estimating the noise masking threshold at each w_i for the block.	based on said tonality function, estimating the **noise masking threshold** [an estimate of the maximum amount of noise that can be added to a sound signal before the noise can be heard] at each w_i for the block.
Claim 2	
The method of claim 1 further comprising quantizing said $S(w_i)$ based on said noise masking threshold at each respective w_i.	The method of claim 1 further comprising **quantizing** [assigning a specific value chosen from a limited number of levels or steps] said $S(w_i)$ based on said noise masking threshold at each respective w_i.
Claim 3	
The method of claim 1 wherein said step of predicting comprises,	The method of claim 1 wherein said step of predicting comprises,
for each w_i, forming the difference between the value of $S(w_i)$ for the corresponding w_i from the two preceding blocks, and	for each w_i, forming the difference between the value of $S(w_i)$ for the corresponding w_i from the two preceding blocks, and
adding said difference to the value for $S(w_i)$ from the immediately preceding block.	adding said difference to the value for $S(w_i)$ from the immediately preceding block.
Claim 4	
The method of claim 3, wherein said $S(w_i)$ is represented in terms of [its] magnitude and phase, and wherein said difference and adding are effected separately for the magnitude and phase of $S(w_i)$	The method of claim 3, wherein said $S(w_i)$ is represented in terms of **magnitude** [amplitude, length, or height of the frequency line] and **phase** [relative starting position of $S(w_i)$'s waveform], and wherein said difference and adding are effected separately for the magnitude and phase of $S(w_i)$.
Claim 5	
The method of claim 1, wherein said determining of said randomness metric is accomplished by calculating the euclidian distance between said estimate of $S(w_i)$ and said actual value for $S(w_i)$.	The method of claim 1, wherein said determining of said randomness metric is accomplished by calculating the **euclidian distance** [straight-line distance between two points] between said estimate of $S(w_i)$ and said actual value for $S(w_i)$.
Claim 6	
The method of claim 5, wherein said determining of said randomness metric further comprises normalizing said euclidian distance with respect to the sum of the magnitude of said actual magnitude for $S(w_i)$ and the absolute value of said estimate of $S(w_i)$.	The method of claim 5, wherein said determining of said randomness metric further comprises **normalizing said euclidian distance with respect to the sum of the magnitude of said actual magnitude for $S(w_i)$ and the absolute value of said estimate of $S(w_i)$** [dividing the Euclidian distance by the sum of the magnitude of the actual magnitude of $S(w_i)$ and the absolute value of the estimate of $S(w_i)$].
Claim 17	
A method of processing an ordered time sequence of audio signals partitioned into a set of ordered	A method of processing an ordered time **sequence** [succession] of **audio signals** [sound signals] partitioned into a set of ordered blocks, each said block having a **discrete frequency spectrum** [distinct, non-continuous

blocks, each said block having a discrete frequency spectrum comprising a first set of frequency coefficients, the method comprising, for each said block, the steps of:	set or amplitudes and/or phases of the frequency components that make up a sound signal] comprising a first set of **frequency coefficients** [the components of a sound signal that together with their corresponding frequencies, characterize the signal], the method comprising, for each said block, the steps of:
(a) grouping said first set of frequency coefficients into a plurality of frequency groups, each of said frequency groups comprising at least one frequency coefficient;	(a) grouping said first set of frequency coefficients into a plurality of frequency groups, each of said frequency groups comprising at least one frequency coefficient;
(b) determining for frequency coefficients in each of said frequency groups a randomness metric, said randomness metrics reflecting the predictability of said frequency coefficients;	(b) determining for frequency coefficients in each of said frequency groups **a randomness metric** [a measure of randomness], said randomness metrics reflecting the predictability of said frequency coefficients;
(c) based on said randomness metrics, determining the value of a tonality function signal as a function of frequency; and	(c) based on said randomness metrics, determining the value of **a tonality function signal** [a signal reflecting the value of a tonality function, which is a function that reflects the tone-like or noise-like nature of a signal] as a function of frequency; and
(d) based on said tonality function signal, estimating a noise masking threshold for frequency coefficients in each frequency group .	(d) based on said tonality function signal, estimating **a noise masking threshold** [an estimate of the maximum amount of noise that can be added to a sound signal before the noise can be heard] for frequency coefficients in each frequency group.
Claim 20	
A method of processing an ordered time sequence of audio signals partitioned into a set of ordered blocks, each said block having a discrete frequency spectrum comprising a first set of frequency coefficients, the method comprising, for each said block, the steps of	A method of processing an ordered time **sequence** [succession] of **audio signals** [sound signals] partitioned into a set of ordered blocks, each said block having a **discrete frequency spectrum** [distinct, non-continuous set of amplitudes and/or phases of the frequency components that make up a sound signal] comprising a first set of **frequency coefficients** [the components of a sound signal that together with their corresponding frequencies, characterize the signal], the method comprising, for each said block, the steps of
(a) grouping said first set of frequency coefficients into a plurality of frequency groups, each of said frequency groups comprising at least one frequency coefficient; and	(a) grouping said first set of frequency coefficients into a plurality of frequency groups, each of said frequency groups comprising at least one frequency coefficient; and
(b) generating a set of tonality index signals, said set of tonality index signals comprising a tonality index signal for each of said frequency groups, said set of tonality index signals being based on at least one of	(b) generating a set of **tonality index signals** [a set of data representing the tone-like or noise-like nature of a signal], said set of tonality index signals comprising a tonality index signal for each of said frequency groups, said set of tonality index signals being based on at least one of said first set of frequency coefficients corresponding to at least one previous block.

said first set of frequency coefficients corresponding to at least one previous block.	
Claim 21	
The method of claim 20 further comprising generating, based on the set of tonality index signals, a set of respective noise masking thresholds.	The method of claim 20 further comprising generating, based on the set of tonality index signals, a set of respective **noise masking thresholds** [an estimate of the maximum amount of noise that can be added to a sound signal before the noise can be heard].
Claim 31	
The method of any of claims 17, 20, or 27 wherein said processing further comprises generating discrete frequency spectrum signals.	The method of any of claims 17, 20, or 27 wherein said processing further comprises generating **discrete frequency spectrum signals** [signals representing the distinct, non-continuous set of amplitudes and/or phases of the frequency components that make up the sound signal].

EXHIBIT B-Brandenburg '714 Patent

Frequency-means number of cycles per unit of time.

Sequence-succession

Audio Signals-sound signals

Discrete Short-Time Spectrum-a distinct, non-continuous set of amplitudes and/or phases of the frequency components that make up the sound signal

S(w_i), I=1,2, ..., N-a mathematical notation for a set of frequency lines in the discrete short-time spectrum, where w_i is a frequency

Randomness Metric-a measure of randomness

Tonality Function-a function that reflects the tone-like or noise-like nature of a signal

Noise Masking Threshold-an estimate of the maximum amount of noise that can be added to a sound signal before the noise can be heard

Quantizing-assigning a specific value chosen from a limited number of levels or steps

Magnitude-amplitude, length, or height of the frequency line

Phase-relative starting position of S(w_i)'s waveform

Euclidian Distance-straight-line distance between two points

Discrete Frequency Spectrum-distinct, non-continuous set of amplitudes and/or phases of the frequency components that make up a sound signal

Frequency Coefficients-the components of a sound signal that together with their corresponding frequencies, characterize the signal

Tonality Index Signals-a set of data representing the tone-like or noise-like nature of a signal

Discrete Frequency Spectrum Signals-signals representing the distinct, non-continuous set of amplitudes and/or phases of the frequency components that make up the sound signal

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Produced by Sans Paper, LLC.