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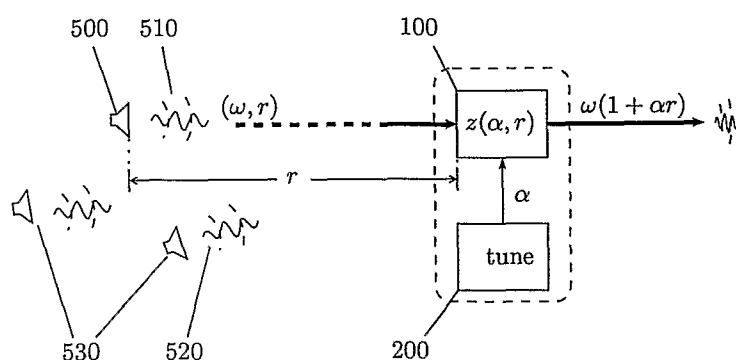
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: UNIVERSAL FREQUENCY GENERATION AND SCALING



Universal frequency scaler

(57) Abstract: Generation of electromagnetic or other waves of any frequency, coherence, modulation, power, etc. and for scaling such waves in frequency by any factor. Generation is achieved by incorporating an available source of desired coherence, modulation and power properties at some band of frequencies and scaling to the desired frequencies. For scaling, a source-distance dependent mechanism of copending applications titled "Passive distance measurement using spectral phase gradients" and "Distance-dependent spectra with uniform sampling spectrometry", which depends solely on source linespread and wave propagation, and is independent of specific material properties,

is combined with a means of determination, or prior knowledge, of the source distance. This distance, from the source to the frequency scaling mechanism, may be shortened with a refractive or dispersive medium, or varied for fine tuning of the frequency scale factor, and its variation may be effected via electrooptic or magnetooptic properties of the medium.

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G01S 13/00 (2007.01)

USPC - 342/25A

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - G01S 13/00, 13/90; G01B 9/02 (2007.01)

USPC - 342/25A, 25D, 85, 6, 25B, 25R; 356/517, 498, 4.07, 5.02, 11

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase, MicroPatent

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,046,695 A (POEHLER et al) 04 April 2000 (04.04.2000) entire document	1-7, 10-18 ----- 8, 9
Y	US 6,853,456 B2 (MELLS) 08 February 2005 (08.02.2005) entire document	8, 9
A	US 6,828,929 B2 (BARBELLA et al) 07 December 2004 (07.12.2004) entire document	1-18
A	US 6,307,500 B1 (CORNMAN et al) 23 October 2001 (23.10.2001) entire document	1-18

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"A" document defining the general state of the art which is not considered to be of particular relevance

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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