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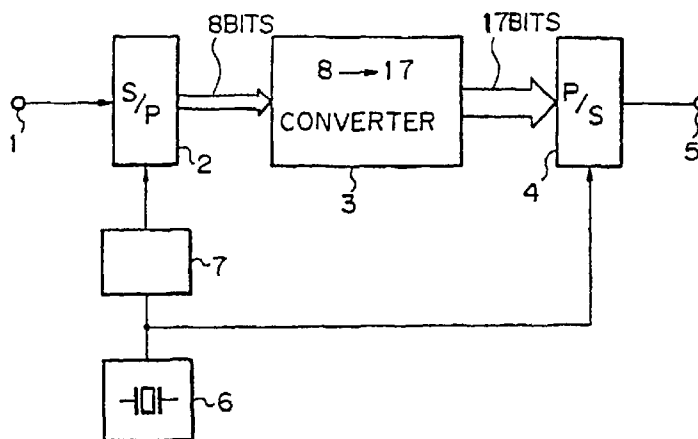
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF CONVERTING A SERIES OF M-BIT INFORMATION WORDS INTO A MODULATED SIGNAL



(57) Abstract: This invention relates to a digital modulation method and apparatus used for recording an audio or video signal, computer data, and etc on a recording medium such as an optical or magneto-optical disc. Data words of m bits are translated into code words of n bits in accordance with a conversion table. The code words satisfy a (d, k) constraint in which at least d "0"s and not more than k "0"s occur between consecutive "1"s. The n -bit code words alternate with p -bit merging words which are selected such that between the leading "1" in the code word following the merging word and the trailing "1" in the merging word are at least d "0"s, and further that between the trailing "1" in the code word preceding the merging word and the leading "1" in the merging word are at least d "0"s. The merging word that satisfies said conditions, yielding the lowest dc imbalance of the modulated signal obtained after modulo-2 integration of the catenation of the alternate code words and merging words is selected. Then, the modulated signal is generated by the catenation of alternate code words and merging words integrated modulo-2 in which a "1" becomes a transition and a "0" becomes an absence of a transition. A unique synchronizing word is inserted periodically.



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