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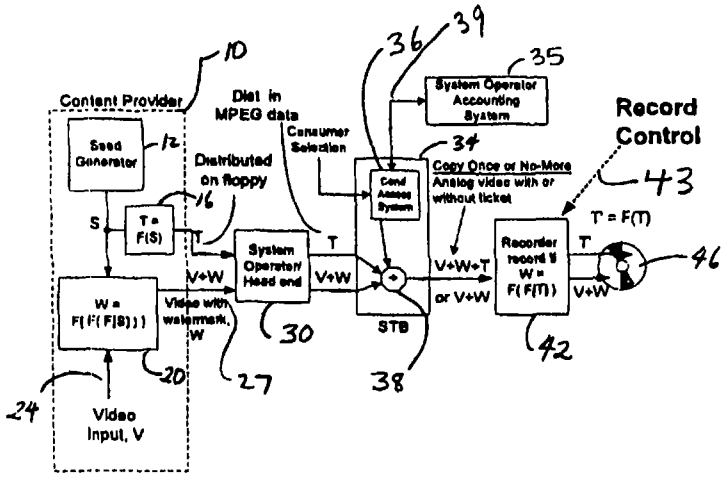
(54) Title: METHOD AND APPARATUS FOR ENHANCED AUDIO/VIDEO SERVICES WITH WATERMARKS AND ASSOCIATED DATA



(57) Abstract

Method and apparatus for controlled copying of an audio or video signal transmitted over a cable television or direct satellite broadcast system or the internet. Copyrighted (or other) audio or video material is protected from unwanted copying (recording) by the combination of a watermark embedded in the audio or video signal at the head end together with additional copy protection data inserted in the audio or video signal, either a ticket or a second watermark. Video line (21) in the vertical blanking interval for (NTSC TV) is used to hold the ticket (cryptographic counter). An audio or video watermark is embedded in the active portion of the audio or video signal. Only if the consumer is willing to pay a fee is the video signal with both the watermark and the ticket transmitted to his recording device which then matches the watermark to a mathematical function of the ticket, and only if they match is recording permitted. Alternatively, this consumer control may operate on a second watermark in the audio or video. The corresponding playback device outputs an audio or video signal which does not have the ticket and hence no further copying is permitted. This enables a single copy to be made upon payment.

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