



Verance Technology

Verance's patented audio watermarking technology embeds digital codes into audio recordings and transmissions regardless of the content, whether music, audiovisual material, or spoken word. This embedding is performed directly into the audio waveform by introducing small information-carrying alterations to the waveform in a manner that is completely transparent. The embedding, statistically imperceptible to the human ear, is designed to survive and be compatible with commercial recording and transmission methods, both digital and analog, and permits the embedded information to be accurately extracted from the encoded audio after audio processing, distribution and broadcast.

The company's patent portfolio of more than 35 awarded patents includes many fundamental innovations related to the application of watermarking technologies to various types of media content, including audio, image, and video, as well as watermarking for copy and usage management, media research, and other applications.

The company's audio watermarking technology also allows multiple layers of watermarked data to be embedded within the same content, each of which can then be detected and decoded by different application-specific watermark decoders. This allows the company's technology to serve a variety of market needs simultaneously, through the deployment of multiple independent watermarks including copy and usage control data, content identification data and specific transactional data.

Key Features

Verance's patented audio watermarking technology is designed to meet the following diverse requirements of content owners and distributors:

Transparency. Verance's watermarks have no discernible effect on audio quality of content.

Persistence. Verance designs its watermarks to survive typical distortions introduced during the production, duplication, distribution, broadcast, and consumer handling of recorded content.

Compatibility. Verance watermarking technology complements other content rights management and security systems such as encryption and digital containers and is compatible with a wide range of analog and digital, physical and electronic formats for distribution and storage of multimedia content.

Tamper Resistance. Verance designs its watermarking technology to resist forgery and unauthorized alteration, decoding and erasure.

Efficiency. Verance watermarking technology enables information to be transmitted and decoded in short segments of audio.

Flexibility. Verance watermarking technology allows multiple layers of independent non-interfering watermarks to be embedded simultaneously into the same audio content for different applications.

Affordability. Verance watermarking technology requires modest processing and circuitry resources and can be implemented for low device cost in high-volume consumer products such as compressed-audio players and recorders, CD players and recorders, DVD players and recorders, cellular telephones, and Personal Digital Assistants (PDAs).