

Adaptive Headgear to Suppress noise generated by dental equipment during procedure

TECHNOLOGY:

This is an adaptive Headgear leveraging the combined benefits of embedded audio processing, AI-enabled noise, and voice classification, and bi-directional communication for efficient noise suppression in dental procedures, ensuring comfort and safety for prolonged use

Intellectual Property:

Indian Patent: 466369

Category of the invention:

- ✓ Medical Devices
- ✓ Noise cancellation
- ✓ Artificial Intelligence

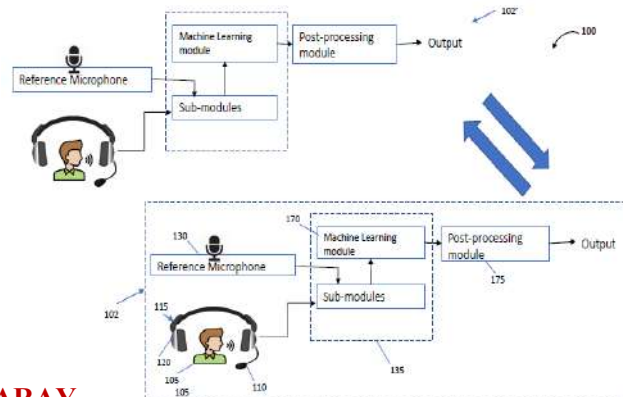


Fig. Illustration of the noise-cancellation headphone system

INVENTOR:

SWADHEENA PATRO

Bhubaneswar, Odisha, India

SRUSTIJEET MISHRA

Bhubaneswar, Odisha, India

SAMBIT PRASAD KAR

Cuttack, Odisha, India

AMIYA KUMAR SAMANTARAY

Nayagarh, Odisha, India

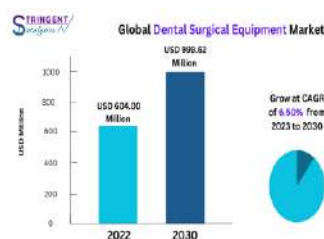
PROBLEM ADDRESSED

- ✓ High-frequency noise generated by dental drills causes discomfort to both patients and dentists.
- ✓ Prolonged exposure to dental drill noise poses risks to the hearing health of both patients and dentists.
- ✓ Anxiety levels can increase in patients due to the loud noise, affecting their overall dental experience.
- ✓ Dentists may experience fatigue or hearing loss over time due to continual exposure to the noise.
- ✓ Conventional methods of noise control may not effectively address the specific frequencies and variations of dental drill noise.

ADVANTAGE

- ✓ Reduced patient anxiety and improved experience: Creates a calmer environment leading to better cooperation and potentially shorter procedures.
- ✓ Enhanced hearing protection for dentists: Effectively reduces harmful high-frequency noise, safeguarding dentists' hearing health.
- ✓ Increased efficiency and productivity: Enables better focus for both dentist and patient, potentially leading to faster and more efficient procedures.
- ✓ Unique multi-method noise cancellation: Combines passive, adaptive, and active cancellation with filtering to specifically target dental drill noise.
- ✓ Machine learning integration for personalized experience: Adapts to various drill sounds and ambient noise for effective and personalized noise reduction

POTENTIAL VALUE:



Source: Stringent
Dataalytics



Source: verifiedmarketresearch.com

USP:

- ✓ Tailored noise cancellation targeting dental drill noise.
- ✓ Personalized noise reduction using machine learning.
- ✓ Enhanced efficiency and productivity in dental procedures.
- ✓ Optimal hearing protection for dentists.
- ✓ Improved patient cooperation and experience.