

5G Music therapy

Objective: to create a scalable palliative care service for neurodegenerative diseases that can be easily deployed in Spain using the advantages of 5G networks and the new capabilities of the high or millimetre band (26 GHz).

Description:

Telefónica, Nokia and Segovia City Council, together with Caritas, Carlos III University of Madrid, University of Valladolid and Alfonso X el Sabio University, have launched the *5G Music therapy* project to help in the treatment of people with neurodegenerative diseases. It is an immersive music video service based on 5G and virtual reality to try to improve the quality of life of people with diseases such as Alzheimer's or Parkinson's, in which several studies have already shown that music provides significant benefits. *5G Music therapy* goes a step further and, together with the auditory content, provides the sick people with an immersive musical environment.

Led by Nokia Bell-Labs and in cooperation with different audiovisual creators, content is being created with 360-degree video recordings that can be viewed through immersive glasses and special equipment. In this first phase, it will be implemented in the Caritas residence of La Lastrilla in Segovia. This initiative is the first 5G millimetre band use case in Spain, the highest capacity and speed in this technology.

After carrying out numerous therapy sessions by qualified personnel, we can highlight two relevant conclusions:

- Immersive music therapy can serve as therapeutic support in geriatric patients with symptoms of depression
- Immersive music therapy has effects on patients with mild or even severe neurocognitive degradation, connecting especially with more unconscious or emotional aspects of their cognitive process



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