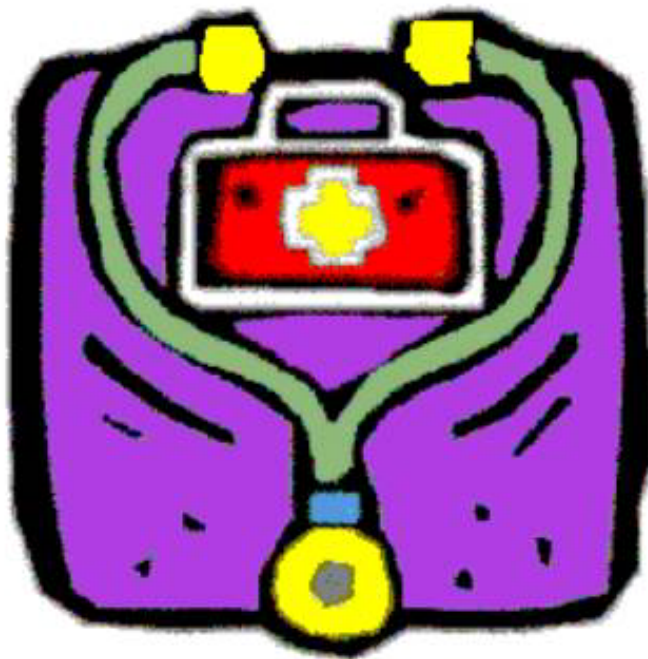


The transmission of scents to the public health service



Olfactory
multimedia
applications
for medical
purposes

- France Telecom R&D seeks to prepare the development of services which will permit the diffusion of scents synchronized with images, sound and/or data transmitted by a telecommunications network (Internet, interactive television, ...).



A first application coming under aromatherapy

The first application coming under **aromatherapy** consists of restoring the nyctohemeral cycle of people who are isolated, living at home or hospitalized and having lost the notion of time (knowing whether it is day or night). The nyctohemeral cycle is governed by the temperature, light, heat, sounds, and meals and also by scents.

In this way, the programmed diffusion of specific smells at mealtimes, of a particular scent when it is time to go to bed or get up could help certain people who wish to "keep the rhythm". Examples could be the scent of orange blossom in the evening, and toast and coffee in the morning.

This could equally contribute to giving people back their appetite because it is known that taste is mainly a question of perceiving smells. Malnutrition is at the origin of many health problems (falls, fractures, depression, confusion...) and represents a serious public health problem amongst the elderly.



A second application in the gerontology sector

A second application, interesting those working in **gerontology**, concerns the detection of the loss of smell, which could signify the beginning of cognitive deterioration. In this way the alteration in a person in recognizing a certain smell could be a result of either a deterioration of the "sensitive" part of the nose (olfactory function), or a semantic problem (inability to give a name to the perceived smell).



In this case, a presentation of photos could trigger the recognition (name) of the diffused scent. Thus, the memory that a person has of a scent, is dependent on two complementary functions in order to be active: detection of the scent (in a mixture or over a base scent) and naming, by the comparison to a database recorded in the brain ("dictionary of smells").

A protocol currently under study by a medical team (Gerontology - LI2G-GPSP - Grenoble) will provide information, from which the observed tendencies will serve to evaluate the possibility of developing medical applications for the remote transmission of scents.



The trading partners

France Telecom R&D in partnership with a medical team at the **Joseph Fourier University**, the **Pierre Mendès France University** in Grenoble and the company **AC2i®**, is studying the possibility of developing applications for the remote transmission of scents through **Olfacom®** diffusers, for medical purposes.



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