

51. Monitoring moods of workers reduces sick leaves

In 2013 TNO-research indicated that one million people of the Dutch workforce show signs of burnout and that stress is the main reason for seven percent of all sick leaves. With the goal of reducing these numbers, we have developed the Fishualization monitoring system. Fishualization enables employees to gain insights into their working habits to reduce stress and increase productivity.

Fishualization is based on two components. First, by combining multiple sensor data we automatically measure the activity levels, the amount of focus and the mental energy of workers. Second, we show visualizations of the state or mood of an entire team of knowledge workers. Each employee is represented as an avatar in the form of a fish. At the bottom of the screen we show 'plants' that represent a group of tasks, for example: writing e-mail, editing a document, web browsing or preparing a presentation.



ICT science question

How to analyze and interpret heterogeneous multi-scale sensor data? What is a reliable model to measure the state of an entire group of knowledge workers?

Application

The Fishualization feedback system can help to reduce stress and increase productivity at work on the basis of an estimation of the workload and the mental and physical fitness of a worker. The initial model relies mostly on computer interaction, identification of tasks, and context switches. In the near future it will be combined with affect and physical aspects. We can also include the analysis of facial expressions or e-mail sentiments.



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COMMIT/ project
SWELL Smart Reasoning Systems for Well-being at Work and at Home

At present there are no sensing based personal coaching products on the market that combine multiple sensors and look at both mental and physical fitness.

Alternative Application

Sensor-based reasoning and decision-making can also be deployed in smart cities or other smart contexts. However, our Fishualization platform has the largest potential in other person-related monitoring and coaching situations, such as self-management of people with chronic diseases or e-learning systems.

Nice to know

"Studies conclude that contemplation of fish in an aquarium seem to have a significant effect in reducing levels of stress and anxiety."

"In Feng Shui, moving water is considered beneficial in balancing chi, and a well maintained aquarium in the right location increases wealth and luck."



The goal of the Fishualization golden demo is to enable office workers to gain insights into their working habits in order to reduce stress levels, prevent burnout and increase productivity.



Fishualization is a reconfigurable intervention aimed at improving well-being at work. It is easily extended with new sensors, reasoning and mapping between data/information and visualized fish behaviour.



Fishualization raises awareness regarding workload and related stress by visualizing office worker activities as avatars on a centrally located display, which gives employees of an entire department feedback.



Fishualization is a unique social intervention that provides a group visualization of the estimated human computer activity and mental condition of a team of office co-workers using a combination of various unobtrusive low-level sensors.