

PerSens: Personality Sensors

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Application description

In all times, misunderstandings among social groups and individuals have led to conflicts. In a family, misinterpretation of the behaviour of the parents, children or partners may lead to a loss of trust. In the worst case this may lead to drifting apart of families and to divorces. The performance of working teams in companies depends heavily on the attitude of the individual members. This situation gets even more complicated in international working groups.

The improvement of social relationships will reduce potential conflicts and can help each and every person in their daily life. This can be achieved if the interacting parties are aware of their own characters and the characters of the counterparts. Of course, all people are different. However, some psychological theories classify people according to their personality types. One of these systems was invented in the beginning of the twentieth century by Briggs and Myers and was successfully used by industry companies to form project teams which worked more efficient.

One of the challenges in applying psychological classifications is the development of tools for determining to which category a particular person belongs. The most frequently used tools are questionnaires. However, this is highly unreliable. To name just a few problems, people usually cannot appraise themselves objectively, they may try to look “better” while answering the questions, or they may even misunderstand questions. This leads to incorrect classifications, and thus renders even the most promising theories useless in the practice.

The proposed system, Personality Sensors (PerSens), consists of a sensor network embedded into the clothes and other accessories of the person. PerSens will determine the personality type of the owner. Besides, it will also notify the owner of his behaviour in the current context and how it may appear to his counterparts.

Scenarios

Below, we describe possible applications of PerSens and the information gathered by it.

Project meeting

Consider a team in an important project meeting. As usually, some participants talk a lot, sometimes they even change their minds several times during the meeting. This is their

method to find solutions. Other team members are very quiet. This can be misinterpreted as being uninterested. However, they may be listening carefully to the discussion and take time to consider the given arguments. In this situation, both personality types have a big problem. The “active” people would not listen to the “passive” colleagues. On the other hand, the “passive” people cannot make the others listen to them. As a consequence, suboptimal, or even wrong decisions might be made, and both personality types blame each other for the project failure.

The deployment of PerSens in the meeting informs each participant about the personality of the others. This enables the project leader and also the whole group to include every team member with regard to his personal strengths. PerSens determines the most efficient meeting schedule, such that “active” people have the opportunity to discuss things, and the “passive” people have the opportunity to observe the discussion. Then PerSens notifies the participants about the most appropriate time to change the roles, such that “active” people have to listen, and the “passive” people have to talk. This way, all members are given the opportunity to learn new skills (listening vs. talking) and the project benefits from the diversity of ideas.

Family Quarrel

Misinterpretation of the behaviour of the family members often leads to serious conflicts starting from trivial causes. Partners may lose trust to each other, drift apart, divorce. Children and parents may part for years, or even for the whole life.

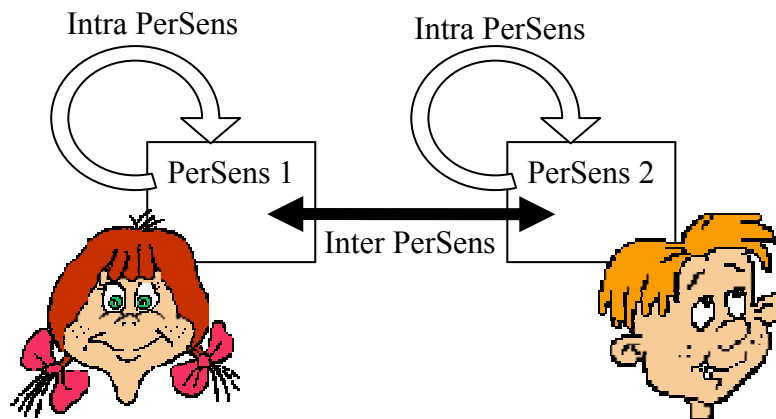
Alice and Bob, a married couple with different personality types, are going to have a quiet evening. Both of them already made concrete plans. Suddenly, their friends call and suggest to go out. According to her personality type, Alice is willing to accept. In contrast, Bob prefers well planned activities. They spend the remainder of the evening in a blazing row, which will not be pictured here.

Now suppose that Alice and Bob got tired of their rows, and go to a psychologist, Charlie, in order to improve their family life. Charlie installs PerSens for them, which eventually determines their personality types. PerSens helps them to understand each other better, and to find compromises. For example, they may agree to accept every other of unforeseen invitations.

Technical Requirements

First, we describe the requirements for intra PerSens which is responsible for determining the mood and condition of the owner and notifying him. Subsequently, the interaction of different PerSens' is described.

The sensors are integrated into the clothes and accessories of persons. The sensors measure body temperature, heart rate, blood pressure, perspiration, and brain impulses. Furthermore, these data is connected to temporal and spatial contexts. This data will be transformed into information about the person's psychological condition. On top of the psychological condition PerSens will generate advices and notify the owner.



PerSens has to be adapted to the owner in order to render useful information. There will be a settling time during which the system determines an initial personality type of the owner. After this period, the system is ready to assist the owner. Nevertheless, there will be continuous observations of the owner to ensure the recency and validity of the assumed personality type.

As PerSens is integrated into clothes, it needs a mechanism to identify the current carrier. This can be done by measuring some characteristics like walking type, typical heart rates, and other unique properties of the person.

When person's PerSens meet other person's PerSens, they interact by sharing personal data. Of course, this implies the agreement of the respective partners to share information about their personality type and current mood. Given this agreement, PerSens may exchange information with respect to the current context.