

Title of the application: Father in Womb

Description of the application

The pregnancy is a differentiated phenomenon in the couple's life. Nowadays, the man tends to participate actively even more in this process. The main idea of this application is to transport some of the mothers experiences as a pregnancy woman (e.g. embryo movements), to its partner, the father.

The motherly perception of the embryo movements is considered one of the greatest landmarks during pregnancy, since it represents the first real perception of the embryo from the mother's point of view. Therefore, it increases the expectations referring to the future child. Is from the embryo movements that the mother, starts to distinguish the baby temperament attributes, besides it is the period when the interaction (mother/embryo) starts to be reciprocal. With this interaction it is possible to start understanding the baby messages.

Nowadays, it is common to find men's seated in the waiting room of the doctor's office, following their pregnancy wives to common medical attendances. This enforces the perception that men need to become even more integrated in the grow and birth of its future child. The gestation can and must be lived by the parents, as a couple.

Both women and men pass for physical and emotional adaptations, including in its sexual relation during the gestation. It is not rare to find physical changes in the partner of pregnant women, as the increase of weight. An example of such conduct is the behavior of husbands in a tribe of Nova Guiné that after the childbirth of its wives, stand lie down in bed as their women, presenting the same symptoms, as pain, discomfort, unreliability, depression and anxiety.

The technical idea behind Father in Womb is to incorporate a Wireless Sensor Network (WSN) in the embryo premises. These sensors will monitor al the embryo movement, and sensors like: movement, sound, image, temperature, heart beat, etc; will help the father percept the behavior of the future baby. The embryo WSN will provide information with an actuator sensor network deployed in father body. The father will held several sensors that will actuate according to the signals provided by the behavior of the embryo (Fig.1).

There are several embryo movements that can be easily monitored, for instance the first hand or feet movements. But as the embryo grows up, the periodicity of movements will increase, as also the force applied, helping even more the movement monitoring.

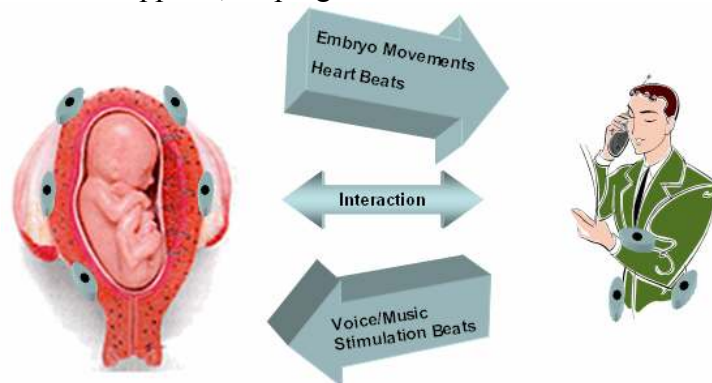


Fig. 1- Sensor interaction between father and the embryo

As the embryo gets bigger, new aspects can be introduced in the application, since the baby starts to react to external stimulations, as light and music, and also understands the physical sounds of the mother, as the example of the beating of her heart. With this in mind Father in Womb application intends also to incorporate some mechanisms that allow the father to communicate with its future child, such as a movement actuator that touches the embryo hand.

One of the most important embryo movement occur during the 7th month, in this month the baby body is yet to short, and starts assuming a more comfortable position by turning its head upside-down, which will keep until the moment of the birth. This moment can also be monitored with our application; with this the father will know that the baby is performing accordantly to normal behavior.

In the family perspective the pregnancy is a delicate moment, since the women's body starts to change, the standard family behavior changes to new rhythms, the couple relationship can suffer slight revolutions, the oldest children's can feel jealousies. With the introduction of this application it is possible to minimize these kinds of problems, by allowing the father (or any other family element) to understand the women behavior, due to a better share of embryo relationship.

- Optionally:

- **Personally data**

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