

About TSB

TSB tecnologías para la salud y el bienestar S.A. establishes and develops **new technologies for customized healthcare and wellbeing solutions**, improving people's quality of life and using its technological and research abilities to create new business opportunities.

TSB was founded in February 2008 as a spin-off company of the ITACA Institute of **Polytechnic University of Valencia**. Drawing on more than ten years' research experience in the socio-sanitary sector, it has the capacity to efficiently evaluate and maximise business potential of R&D results as well as to bring new **solutions and products** to the market that meet the needs of our clients.



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Our children safe and under control during their excursions



What is SPHERAmobile®?

SPHERAmobile® allows localization, control and identification of children outdoors in an easy, secure and efficient way.

Use cases and scenarios

SPHERAmobile® has many applications, but it is mainly designed to control group of children during excursions, summer-camps and guided tours. It can also be used for groups of handicapped persons or for the elderly.

How does it work?

The system works everywhere in an autonomous way using SPHERAone technology developed by TSB. The person in charge of every group carries a PDA which will be used to manage the lists of children. To identify them and to detect if any child goes away from the group. Moreover every child uses a bracelet which serves to identify and locate him/her in an area of 20 metres around the person in charge.

The whole system can be customized and it enables the control of different groups by different persons at the same time.

Advantages

During trips, summer-camps and excursions SPHERAmobile® allows the person in charge of the group to control the children, detect possible absence children escaping or lost, and to consult relevant data of any child, as well as to identify them in any place or situation.

Moreover, safety and control is of vital importance for parents and this system contributes to a higher level of confidence when their kids are away.

Main functions:

- Tracking: it ensures the presence of children in a determined area around the person in charge.
- Identification: just by reading the bracelet we can know the identity and any relevant data about the child wearing it.
- Safety: in case of a possible missing child, the system detects it and warns the person in charge.

Technical characteristics:

- ZigBee Technology (fully ZigBee compliant), to locate and track people to communicate between bracelets and PDA.
- ISM band (Industrial, Scientific and Medical) (2,4 GHz)
- Coexistence with WiFi, Bluetooth and other communication systems in the band.
- PDA: operating system Windows mobile
- Battery duration of the bracelet: more than 1 year
- Bracelet with Texas Instruments module inside
- Waterproof bracelets
- Working temperature: -15°C to 50°C
- EC certification



Successful cases

After more than 2 years of investigation and tests together with the Summerschool of Universidad Politécnica de Valencia (ESCOLA D'ESTIU), the system has been used to control, track and identify children during the summer-camps, excursions, travels and camping holidays.

