



## MGIS (Mobile GIS) storage, interconnection & vehicle power system

Southern Water, situated in the South East of England, provides drinking water and sewerage services to over 4million customers. The Company has a comprehensive mobile geographic data system using pen computers (MGIS), which have been in use for five years. The MGIS system gives their mobile staff access to accurate GIS records, and also allows these records to be kept up to date in the field. When Southern Water decided to upgrade their system, and replace the hardware, OSYS were asked to assist in the integration of their systems both when used in the field, and when used in the vehicle.



### The Key user requirements:

- A flexible system to accommodate and interconnect a new MGIS Fujitsu pen computer and a new Pentax thermal printer.
- A mounting system to hold the portable printer and its paper supply
- Consideration of a range of user requirements including:
  - The ability to use the pen computer comfortably whilst walking and whilst working in the vehicle cab
  - A power system designed to power the computer and printer without causing flat battery problems in the vehicle.
  - A simple vehicle fitting and mounting system that can be used in a wide range of vehicles, and different positions.
  - Adopting a soft mounting, stowage and packaging strategy to minimise risk of staff injury and maximise equipment protection.
- Connectivity to external devices for data update
- Smart businesslike appearance
- Cigar plug connection or custom installed in vehicle.
- Turnkey service including a vehicle installation service.

### Rapid prototyping

To engineer a solution OSYS worked with the customer and his end users, first defining the requirements, then building prototype systems for evaluation. Rapid prototyping was a key stage as it allowed users to have input to the usability and aesthetic of the design, and allowed OSYS to carry out

electronic, mechanical, EMC and thermal tests. Once the design was complete the validated design was immediately moved to production, meeting Southern Water's deadlines for critical operations roll out dates.



Fujitsu pen computer and interface in impact absorbing moulded ABS shell; Power supply, and complete system undergoing rigorous EMC testing.

### **The end product:**

- Robust Vacuum formed ABS tray assembly to integrate Fujitsu pen computer and it's interconnection system
- Rugged cable interconnections carrying power and data
- Laser formed, resin cast printer and paper housing.
- Protective soft carry case system for mobility, on steering wheel mounting, document and vehicle stowage
- Versatile 'Pouch' stowage system that fits on seat front, seat back or cab wall.
- Intelligent vehicle triple supply power unit
  - Printer power
  - Battery charging
  - Computer power
  - Vehicle voltage sensing
  - Vehicle ignition sensing
- Robust cable system for office data transfer
- Fully managed vehicle installation programme

Southern Water has 180 mobile workers that use the MGIS system. It is a critical operational tool for the Company in maintaining high standards of service to its customers and underpins operational efficiency. OSYS technology specialises in mobile IT consultancy and in developing solutions that integrate mobile technology components into complete systems.

*Southern Water's Business Project Manager responsible for the project commented; "I am delighted with solution that OSYS have designed, produced and installed for our mobile users to date. With a significant amount of project work in hand I have every expectation that OSYS will continue to provide a high level of service and commitment to the project".*



Pentax Pocket Jet based printer assembly, Over seat computer and printer mount.

*Let OSYS help you plan and integrate your next mobile data system.*