



CJS Technology Limited

# The Hermes System

A System to support Subsidised Community Transport



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## Overview

The Hermes system is designed to offer Local Councils a solution to the problem of offering subsidised transport to the elderly and vulnerable in their jurisdiction. It allows the Council to use alternative transport options such as community ambulances & taxis (referred to as Transport Operators) to offer a door-to-door transport option to those that need it most.



A Handheld Terminal used in the Hermes System

The system utilises durable handheld smartcard readers to remove transport tokens from a token store held on the Member's smartcard. The tokens may either be issued on a per-annum basis or, alternatively, operated as an e-purse where the member can add tokens to their smartcard at participating Post Offices, Libraries or via the Transport Operator. Details of the journey are recorded and returned to a central database for billing purposes.

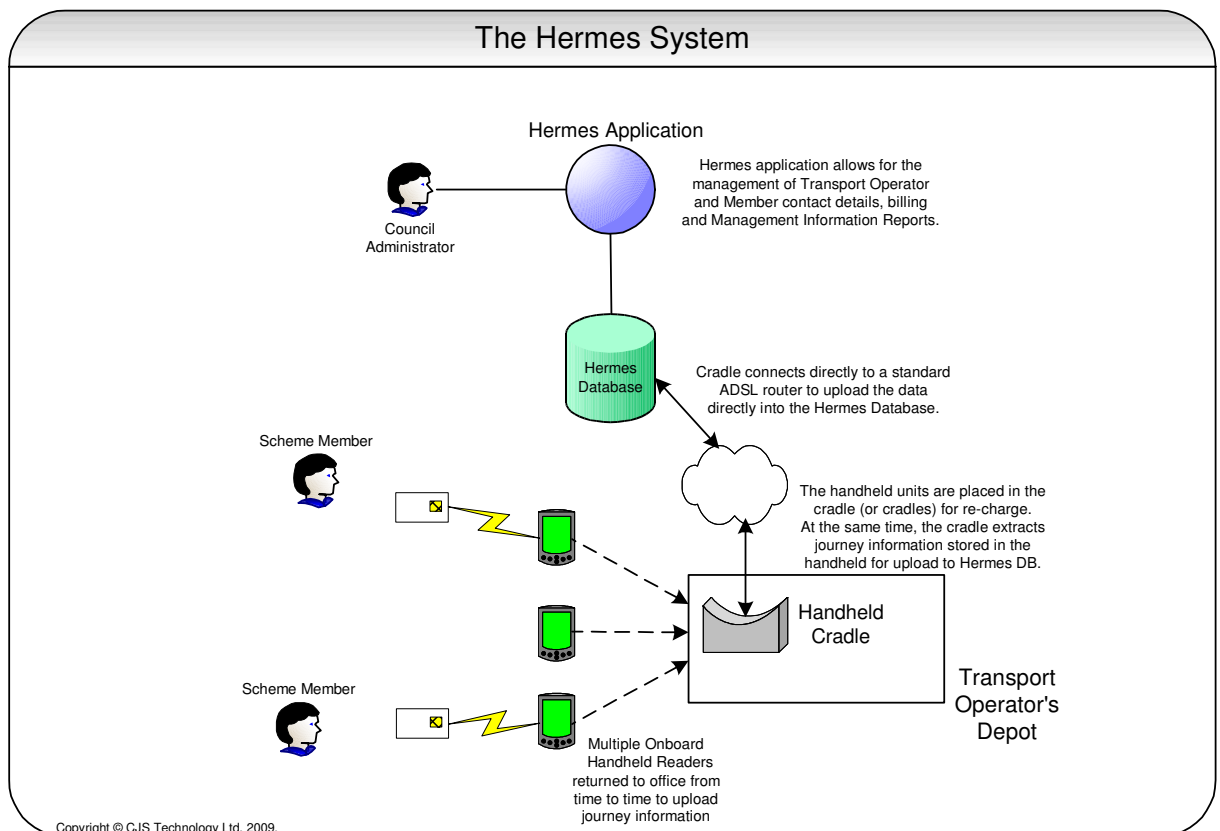
The Hermes Application offers an interface to the database that allows for the creation of Members, maintenance of their contact information and details of the journeys they have made. It also allows for the creation of Transport Operators (with details of the primary contact) and the assignment of the Handheld Terminals. Transaction information may be viewed by Scheme Member or Transport Operator.

## The Hermes Solution in Operation

The figure overleaf shows an overview of the system.

The process begins with an application form from a member of the public. If approved, the Council Administrator uses the Hermes Application to create a Scheme Member. Hermes allows for the storage of personal contact details as well as a free-format "notes" field that allows for the recording of special needs, phone conversations etc.

The new Scheme Member is then assigned a smartcard. Hermes allows for replacement cards (when required) and maintains a complete history of all cards issued to all Scheme Members. Depending on how the Council wishes to operate the scheme, the smartcard may be issued pre-loaded with tokens or the Scheme Member may add tokens at participating re-charge centres such as Post Offices, Libraries or the Transport Operator itself. These tokens may then be spent by the Scheme Member on either a per-journey or per-mile basis as required by the Council.



An Overview of the Hermes System

When the Scheme Member wishes to make a journey they ring a central telephone number and book a journey. The Council Administrator uses this information to book the journey with a suitable Transport Operator and issues that Operator with a unique journey number. This allows the Council Administrator to book the most suitable form of transport taking into account the Scheme Member's requirements and also any other local journeys taking place at the same time.

When the Scheme Member undertakes the journey, they hand their smartcard to the driver who uses a Handheld Reader with a simple human interface to validate and charge the journey. The details of the journey are stored in the Reader's memory for future transmission to the Hermes database. Very long battery life and a large transaction store allow the Reader to remain out of the office for up to a week at a time and then quick re-charge times mean the Reader can be back out in the vehicle in just a few hours.

The Reader is re-charged by being placed in a cradle at the Transport Operator's depot/office. The cradle may be connected to a free port on a standard ADSL Router so that when the Reader is placed in the cradle, it can communicate the contents of its transaction store over a secure TCP/IP link to the Council's Server and have the data pumped straight into the Hermes database. Once the database confirms the receipt of the records the Reader removes them from its memory and continues its re-charge process.

For the few Transport Operators that do not have access to broadband, a facility exists that allows the Transport Operator to transfer the transaction information on to large storage smartcards and have them posted to the Council. In this circumstance, the data remains on the terminal until the next DataCard confirms receipt of the data.

Once the transactions are stored on the Hermes Database, the Hermes Application allows the Council Administrator to view all journey transactions by Transport Operator, by Terminal ID or by Scheme Member. Complete transaction reports may be produced in PDF or Excel format for any Operator (Retail or Transport) for any period including *favourites* such as Last Month, Last Financial Quarter, This Year-To-Date etc. An invoicing system allows all transactions stored on the database since the last invoice to be added to a new invoice. This allows for data not sent *in time* last month to appear on this month's invoice. All invoices may be reproduced for reference if required.

Other management reports include the report of Scheme Members by Council District, Terminals Assigned to Operators, Export of Scheme Members/Operators details for Mail-shot and a list of those Operators that have yet to send their information this month.