Mobile technology es
but this is just the sta

The Transport Innovations show at the NEC in Birmingham last week saw the launch of several new technologies designed to make public transport easier to use. **Oliver Howarth** looks at the passenger-focused innovations that are emerging and finds that the mobile phone is at the forefront of a revolution that will transform transport
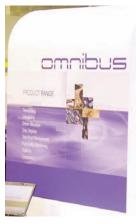

The fact that this year's *Transport Innovations* show was set alongside Bus & Coach Live at the NEC this year perhaps wrongly suggests that the event had little to offer the rail industry. In fact several of the most interesting and innovative exhibits were applicable to both modes, but the potential is still not grasped on the roads.

Passenger-focused innovations are doing three things - providing information about the travel product; assisting the customer through the purchase of tickets; and reassuring them when things go awry. We now have a generation of passengers who are highly computer literate and for whom not just communication but information gathering are based on a mobile phone, making this the emerging sector for growth.

But obviously most high technology products take a certain amount of bedding in. This means that the transport industry needs to be anticipating the demand for products now and should already be starting off expandable ventures for the future.

Transit has looked at concepts like Megabus in the past - unlikely sounding products three years ago but an accepted part of the landscape now. In these transport services, three separate computer systems are being used to create a single, logical entity. The first is a sales, ticketing and accounting platform. The second is a telephone-based call centre that converts would-be and frustrated customers into happy passengers. The third is about communicating information about true and credible arrival and departure times.

This background is necessary to help decipher the different technologies you are confronted with, as you perambulate the NEC. If a stand offers you "voice recognition speech solutions", should you walk on by? How will speech solutions, whatever they are, help the man on the Clatterbridge omnibus? Well it depends who you are - train operators, TfL and several substantial bus operators with headquarters

in the North of England or Scotland might well be interested. **Eckoh** were demonstrating their work on the Train Tracker for National Rail Enquiries (NRES), where a computer asks you questions and listens to what you say to give you the latest real time information about trains.

As yet, such Big Brotherish technology is not applicable to the bus industry but given only a tiny bit more work to Real Time Information systems, there is absolutely no reason why it could not be deployed to deliver information cheaply. Watch this space.

Whilst the first of the three systems listed above is now in general currency in the form of websites with a payment mechanism, the second system - the customer contact centre, as successfully deployed by NRES and by JourneyCall - is still an expensive necessity. The third system, giving out journey-related information, is often seen as the least important yet has garnered the most competition. In this arena there are two major criteria which tend to sort the different competitors out - speed of response, and delivering that response in a customer-friendly format.

Having been deeply involved in hands-on transport data for several years, and having written up this exhibition for

Transit annually since 2003, your scribe can deliver a couple of definite opinions. The fastest system to calculate accurate and reliable journey plans is that of **JourneyPlan**, which seems to have a proven set of algorithms.

However the best call centre solution for mapping and visuals is that of **Trapeze** (formerly AIM), whilst the best system at delivering real time information in the form of text messages to a mobile phone is undoubtedly **Kizoom**. But getting complicated journey plans into the customer's hands on-the-move is a nut which has not been cracked up to now. Web-based systems can be too slow to deliver due to problems with coverage. Electronic displays in bus stop flags have been route-specific dumb outputs - you cannot enter into meaningful dialogue with a bus stop. Until now that is.

A new generation of bus-stop pole-mounted terminals is now appearing and stylish examples appeared on the **Tandata** and **Infomatixs** stands (the former with the ability to deliver full colour data). But increasingly there is no need to provide such a screen - the terminal is in your pocket right now, at no cost to the transport operator. Better still it can also be the ticket.

The company closest to delivering a future-proofed suite of products on a mobile

sential for transport, art of the revolution

Visitors mingle around the many products on show at this year's Transport Innovations show which took place at the Birmingham NEC on November 10 and 11, alongside the Bus & Coach Live Exhibition

phone appears to be JourneyPlan, with two exciting new innovations on display. One is a full mapping functionality delivered in a format suitable for mobile phones with colour screens, and packaged so that its cost to the end-user is negligible, if not free. So far, all attempts to sell passenger information via mobiles have failed because customers object to paying typically 25p to discover the wayward whereabouts of their bus home. This new innovation could break down that sales resistance.

And still in the mobile realm, **Moovera** have developed a system to deliver wi-fi to on-board passengers, a development which will probably become an "expected", "free" part of rail and commuter coach services anytime soon.

Ticketing using mobile phones has been a recurrent theme for some years, with **Mobimatics** having the most developed solution on the market at the moment, using 3D barcodes. But we still await a built-in reader on an existing ticket machine system. However the big driver for change in this sector has been the decision to introduce free concessionary bus travel across England from 2008 using ITSO smartcards (initially as flashpasses in most parts of the UK). This builds upon the full-scale re-equipment seen in Scotland at present and has seen traditional adversaries

Wayfarer and **Almex** rejoined by **Cubic**, **Init** and **ERG** as the ticketing market expands. The successful deployment of ITSO by Blackpool Transport last year has been followed by a rollout across much of north west England using Wayfarer's widely used TGX150 - a ticket machine now in the shadow of the new TGX200 and TGX250 which give the driver more control over peripheral systems such as cctv. The race for a handheld ITSO ticket machine is now on, with Almex's Hoft & Wessel-designed Mobile vying with the simpler but rugged PayCell machine marketed by **John Groves Ticket Systems** on behalf of Wayfarer to be first to obtain full ITSO certification.

Other manufacturers can offer very impressive looking hand-held consoles - the new one displayed on the **Fleetwood** stand has a great deal of potential for small operators and coach work - but for the bigger fleet orders ITSO-compatibility is now going to become vital. The fully-integrated touch-on, touch-off capability being rolled out on TrentBarton's Rainbow routes by Init is surely the way most operators will want to see their capability developing over the next five years - cashless transactions with complete statistical and loading data for every passenger journey.

Whilst in the vehicle cab, it is worth mentioning that **Tait** were showing a

> **'The terminal is in your pocket right now, at no cost to the operator'**

system that allows operators to equip their fleets with proven, reliable Band III radios now and update them with automatic GPS functionality on the same, effectively free, private radio network at a later date.

Scheduling systems are huge calculating engines designed to devise the most efficient staff rosters to operate a set of timetables. As such they tend to be essential but unsexy, giving their outputs in spreadsheets and numbers. But they are the building blocks to all sorts of downstream systems. **Omnibus Systems**, **Trapeze** and **Giro**, were all offering well-developed variations on this theme and, in a mature marketplace, it will be the detail of how each system relates to your local working practices that guides your choice.

A shake-up in Scandinavia has seen Tele-Nor, who have previously offered their proven systems to the UK without finding takers, subsumed into the Swedish firm **Hogia**. The Hogia software has the rather useful difference of not defining which scheduling and rostering information is needed nor what form it must be output in. Instead of all the data being locked in a protected black box, it uses an open architecture and recognises all the widely-used computer protocols. As such it enables purchasers to simply replace those systems which need replacing, without making other perfectly viable computer systems within the company inoperable. More of this thinking please.

On the same lines, another innovation from JourneyPlan is a product called Diadem+ which simplifies the import, editing and export of timetable information so that existing files from all the main scheduling systems can be imported, expanded and then output in a variety of formats including both web formats and the special XML format required for the forthcoming TransXChange Electronic Bus Service Registration system. The eyeopener is that this software is to be given away free to operators, thus allowing them to supply data to traffic commissioners and councils without the expense of upgrading their existing scheduling systems.

Demand responsive transport systems depend upon sophisticated real-time schedulers and **PPS/EDV** showed an advanced integrated system which gets over many of the problems of fleet management found in lesser systems. But the big winner at the exhibition must be **Logical Transport**, who secured a major contract from National Express to provide the software and in-vehicle systems that manage their new Dot2Dot airport DRT service. Here we have a classic example of leading edge technology enabling an innovative new service – it is surely bound to prosper. ∎