

Are transport users taking matters into their own hands?

Transport services are traditionally provided by 'the professionals', who take it upon themselves to provide what the public want and need, or at least what they think the public want and need. But modern technology seems to be enabling more and more transport users to design their own, bespoke services, as the 'Ideas in Transit' research project is revealing. **Rik Thomas** reports



'User defined' transport applications can help travellers 'get even' with companies that have allegedly failed to provide an adequate level of service provision

THE FIVE-YEAR Government-funded research project Ideas in Transit got underway in October 2007 with the aim of investigating the extent to which, according to the project's website, "consumers are no longer passive recipients but are adaptors, inventors and innovators", and how this trend is affecting the world of transport.

"The opportunity for user innovation to engage the masses is vastly improved via the trends in online communities and mobile communications," the IiT site adds. "Already this global connectivity has spawned user-generated content through conduits such as wikis and blogs. Work that looks at Intelligent Transport Systems (ITS) typically follows a top-down approach, from companies (like satellite navigation systems) or from government. Ideas in Transit asserts that there may be significant, but largely overlooked, sources of innovation – particularly where transport users innovate upon existing forms of information or communications technologies, perhaps in a different way than their creators intended."

So how has the Ideas in Transit research team gone about identifying all of the 'user innovation' transport projects out there and what have they been doing with this information, now that

the project is almost exactly at its half-way stage?

The technical term adopted by IiT for identifying interesting projects is "a mixed method approach", which, according to Professor Glenn Lyons from the University of the West of England (who is the principal investigator leading the research) involves pretty much throwing the kitchen sink at the problem. "When we started this we didn't know what we were looking for... or how to find it," Lyons admits with a laugh, so the project partners started looking for information in any place they thought they might find it. "We used web browsing, the academic grapevine, conferences and online fora," he adds. And this broad range of techniques soon proved to be highly effective. "We needed to find 12-16 projects to study but soon discovered that there were many more out there," Lyons says, pointing out that IiT has, since its inception, uncovered over 200 'user innovation' projects. He cautions, however, that this is not a definitive list and also warns that the project list as it stands has a strong bias towards projects that have a presence on the internet. "At the outset we had the view that we would find a man in a shed doing something innovative that he took for granted

but that was potentially transformational," Lyons explains. "But the question of visibility soon emerged."

What this refers to is Ideas in Transit's innovations portal website (www.ideasintransit.org/portal.htm), which has been established in the hope that it will become a self-sustaining resource in a 'wiki' kind of a way, with users continually adding details of new projects and updating the data on existing ones. "So portal projects are there because they have a web presence," he adds, whilst also noting that, to date, the IiT has "struggled to light the touchpaper" on making the portal self-sustaining.

Finding out what works

"The plan was first to unearth the extent of user innovations and then learn more about the enablers of and barriers to innovation... and finally to pick up on certain ideas and potentially help them move forward," Lyons says, moving onto his team's specific interest in IiT.

"Intelligent Transport Systems generally are developed in a 'top-down' approach that emphasises speed and efficiency," he also notes. "But, in a sense, user innovation is a decidedly

different approach that is a potential challenge to this 'regime'... and I am interested in whether it will turn out to be complimentary or contradictory."

What he means by this is that it is by no means certain that the travelling public are nearly as obsessed with travelling faster and/or 'more efficiently' than either the media or many transport professionals assume they are. This may seem to contradict the fact that IiT has already identified over 200 user innovation projects but Lyons explains the apparent anomaly by pointing out that by no means all of them are intended to

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make travel 'faster', and also that there is no guarantee at all that 'bespoke' travel solutions developed by and/or for a small group of travellers will provide a service that large numbers of the general public will ever be interested in taking up.

"Do the public perceive that transport is a problem?" he asks rhetorically. "The media says 'yes' but... we obsess in the transport industry with the idea that we must solve problems but the public is actually often not that concerned, therefore there is often not much take up of what is on offer."

Which is not to say, however, that user innovation isn't potentially hugely important, since large numbers of new ideas could transform the world of travel, even if the number of people using each individual service is quite small. "People can produce bespoke solutions and 'top-down' industry can't do that," Lyons says. "The Government's Transport Direct travel information website [a project that he has previously worked on], for example, becomes just impenetrable if it tries to become too 'personal'."

Lyons is also using the IiT project to study how the dramatic rise to prominence of social networking websites is affecting transport. He specifically mentions car-sharing schemes, for example, noting that 'traditional' car sharing often struggles because it is trying to match up complete strangers, whereas a car sharing option incorporated into Facebook could, potentially, be far more successful because it would be pairing up friends, or friends of friends. A second example is one of Lyons' PhD students who is using Facebook to research on how people spend their time when on buses. "He described it to me as like getting people talking down the pub," Lyons explains. "Which is potentially a much more effective way of getting information than stopping them in the street."

"YouTube also has only got going since this project was first conceived," he points out. "The challenge is just to stay abreast of all this stuff."

Who knows best?

Aside from Lyons' team at the University of the West of England, meanwhile, one of the other three IiT project partners is another academic institution, Loughborough University, and this body specialises in user-centred design and will be investigating the extent to which user innovation projects are actually better than 'top-down' ideas in the way that intuition says they should be. "The notion that the users always know best comes from the heart," Lyons explains. "But in reality they may often not necessarily be much more attuned."

Tracy Ross, head of the mobile and telecoms division at the Applied Ergonomics Centre at Loughborough, broadly concurs with this last comment. "We are interested in grassroots innovation and whether it actually helps end users," she says. "It obviously has the potential to do so but there is currently not much actual research into whether or not it actually does."

Ross's team at Loughborough, therefore, is currently in the process of identifying a small group of projects (probably about 7-10) that it will study in detail. "We want to study extremes – some projects that are doing really well and some that are stalled, or moving slowly," she says.

Part of the IiT project's remit is to help some of the user-innovation projects 'get off the ground' but Ross stresses that: "While we will offer some direct input this is about more than offering a free consultancy service... We want to learn what makes them tick and maybe even encourage the Government to offer more support to certain schemes, for example by doing something to help a taxi-sharing scheme that is being held back by legal barriers and obstruction from vested commercial interests."

Mapping territory

The third and fourth partners in the Ideas in Transit are two 'mapping people', ITO World and the Ordnance Survey, but the two groups have tradi-



The academic 'half' of the Ideas in Transit team is being led by the University of the West of England's Glenn Lyons and Loughborough's Tracy Ross

tionally taken a very different approach to the concept of providing mapping services, with the OS tending to keep close control over its proprietary mapping data whereas ITO World places a strong emphasis on user-generated, 'open source' mapping data. "This is the exact opposite of the traditional business model of the OS," Lyons points out, whilst adding, however, that this began to change following an announcement by Prime Minister Gordon Brown in March that the Government has rejected the option of continuing with the OS's traditional way of working and more towards providing mapping data free to the public.

According to ITO World's co-founder, Peter Miller, his company's job "is to build the most accurate, multimodal transport model we can... for everybody." And his core approach is resolutely to build this model using user data, rather than information provided from, shall we say, more 'formal' sources. "Waiting for officials in suits do things wasn't the way forward," he explains. "A person who lives somewhere knows that place better than a suit who doesn't."

"The idea that consumers are inherently incompetent is now being challenged," Miller suggests. "The whole paradigm is shifting... the day of only transport professionals having the tools to make changes are basically gone."

There are two main strands to Miller's work – the production of user-generated maps to 'rival' those produced by the OS and the production of Wikipedia articles on transport projects. "There is now a Wikipedia article about every A road in the country and the information contained within these articles is getting better every day," he says. This means that Wikipedia is gradually becoming established, in part thanks to Miller, as a 'one-stop shop' for all the information on a road, or rail line, or proposed tram scheme that has hitherto been dispersed in disparate locations. "Official sources are inconsistent in their presentation of data," he explains, also noting that it actually makes sense for the relevant data to be collated in Wikipedia because this is a resource that people are increasingly turning to as their first port of call. "The Highways Agency website is actually very good," Miller concedes. "But the Wikipedia site on the A14 road, for

example, gets a lot more hits... 70% of students, apparently, will now start any research project by looking on Wikipedia."

This trend has yet to be recognised by the establishment, Miller contends. "The authorities just don't get Wikipedia," he says, but one day he thinks they will. "Didn't Gandhi say that first they ignore us, then they laugh at us, then they fight us and then they surrender?" he asks rhetorically.

Miller's other interest is open data source mapping being used, for example, to overlay traffic accident location on a 'conventional' map, thereby providing people with a far more effective representation of where the accident blackspots are than a tabular representation of the same data.

One interesting effect of more user-defined transport applications is, of course, that more data is likely to come to light than the authorities would possibly wish for (one project identified by IiT, for example, helps citizens pressurise their local authorities to get potholes filled in more quickly). "I am in a funny position on this," Miller comments, noting that as a private company he can use the IiT project "to go 'off piste' and look at things that might be disruptive to the DfT".

Growing the cake

Chris Parker heads the research and innovations department at the Ordnance Survey and he explains that the OS became involved in the IiT project in order to find out how OS data could be used in ways that the organisation itself could never envisage. "We are trying to find the 'unmetered need'," he says. The GeoVation website set up by the OS, for example, has, Parker says, already identified a strong trend towards a need for more data on accessibility, for groups such as the disabled. The plan is that OS data can now be made available to potential user-innovation projects for free on a 'try it and see basis', with a commercial agreement involving money changing hands only negotiated once it has been determined that the user in question has a potentially lucrative business on his or her hands. "The idea is that helping trends develop can grow the cake for everybody," Parker notes. "Our interest is not to innovate but to be a resource for user innovation." **LT**



The Ideas in Transit project has tracked down user-defined transport applications from all around the world