TEXXI

ENERGY EFFICIENT TRANSPORT SYSTEM

A COMBINED BACKGROUND DOCUMENT AND PROPOSAL FOR MILTON KEYNES

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Prologue

"Our customers are our 51% shareholder"

Texxi came about by the holistic application of a variety of systems and processes from myriad fields as dispersed as Investment Banking, Physics, Engineering Mathematics, Internet Architecture, Military Strategy, Information Theory and Transport Studies.

Crane Dragon believes in creating dynamic partnerships, in which all groups are empowered and contribute their own time and resources, to help ensure from the outset that everyone involved has a vested interest in achieving success. Crane Dragon attaches great priority to working with local organisations, as this means solutions are most likely to be tailored to local conditions.

This is why we insist on contributions from local councils and other community stakeholders and leaders. Everyone who contributes gets a cut of the results. Equal Reward for Equal Risk.

In keeping with this approach, we encourage councils to approach Texxi from the bottom up and understand all the capabilities the platform can bring to their city / local community. It is also key for council members to engage in the belief that "a good idea is a good idea no matter from where it originates".

We aim to remove centralised idea generation processes from the evolutionary model of Texxi. We do not need purposeless "credentialism" - a good idea will stand on its own merits regardless of its originator – there is no one organisation with a monopoly on innovation – there never has been, despite attempts throughout history to centralise idea production.

Scope of document

This document will present

1) A full business case including proposals for the level of investment from a typical stakeholder group acting as the Franchisee (council, police liaison and local business) and corresponding revenue participation

2) A proposed timetable setting out the programme from received “Letter of Intent”, through the negotiation phase, to the demand mapping exercise, to the launch date.

3) A full Demand Mapping Exercise Plan with costs for the surveys and description of how we intend to promote a Texxi scheme in Milton Keynes, including details of how we propose to engage local Hackney Carriage operators.

4) The credentials of the marketing company (N2O) that has been proposed to handle the launch and promotion of the Texxi service in Milton Keynes.

5) Details of what operational support and ongoing promotion of the scheme will be available to the franchise after initial launch.

6) Exact details of what is required from the stakeholder group (as the franchisee) in terms of additional promotion, liaison with operators and management of scheme.

The *Crane Dragon* Philosophy

We have entered the era of the Long Tail.

There is too often a temptation to think that a point being made early on in discussions about the operating structure of a Texxi Scheme is not relevant to the community in question. We have noticed this in some meetings with councils, but in fact it is essential that council decision makers try to absorb as much of the reasoning that has gone into Texxi and not succumb to the hasty need to focus on just one point since one could miss solutions to several other problems by failing to fully grasp what Texxi can offer.

There is a holistic process behind Texxi (which is by no means a finished project- it will continue to evolve), very similar to how the architects of the original internet approached that problem. We want to build a fractal, scalable model of Demand Responsive Transit with the highest probability of success when implemented which spreads virally via a meme carrier at the lowest possible cost to all involved.

Thus far, this has been achieved by Crane Dragon having absorbed the lion's share of the setup costs of the original system, propagated the concept globally in under 3 months (using viral methods such as blogging, forum insertion and viral videos on media such as http://www.youtube.com, http://www.grouper.com, http://videos.yahoo.com, http://video.google.com and of course, http://www.texxi.com). The franchise model adopted allows councils and affiliated (shadow) organisations to deploy a Texxi implementation at the lowest possible cost with a high chance of success and most importantly a high chance of the scheme being self-funding (cost-neutral after 6 -12 months) with the possibility to generate actual profit in higher density areas.

Operationally, Texxi was set up as a cluster of distributed cells at a very low burn rate. Following the technology crash in 2000, by 2004 equipment and bandwidth dropped in price to previously unimaginably low values. Coupled with the rise in availability of lower cost broadband and leased line solutions to more addresses, this allowed for considerable flexibility in options for the deployment of our systems, physical diversity of I.T. equipment and redundancy of systems for a very small amount of money compared to the pre 2003 era.

We also enabled all officers of the company to contribute ideas and experience – in fact no people without specific experience in technology were “hired”. All “hires” are polymaths with overlapping skills in a variety of areas but with a heavy lean towards a background (somewhere) in hard science and engineering.

We don’t have set meetings – we are in constant communication and all involved submit ideas to our distributed ideas bank. We can access each others contact and diary information and in almost all cases, any one person can see what everyone else is doing.

The result of this decentralisation is that our aggregate decision cycles are faster and qualitatively better than those of our industry counterparts. We are not bogged down by politics, the need for agreement consensus or face-saving. We adapt as an organization, we have incredible capability to get a lot done with a bare minimum of resources.

We employ a brutal “Darwinian” model of innovation, where the best ideas are identified quickly and implemented almost immediately. There is no hierarchy for idea generation. We will always attribute the ideas to the originator and provide rewards for work that is performed - not for grades achieved in years gone by. We have found in fact that the more someone respects “grades” over “achieved projects”, the less useful they are to our organisation.

All development cycles are iterative and adaptive – which yield better products. Wherever possible we look to use highly-rated open source solutions.

Of course the flip-side of this is that blushes are not spared. If someone does something stupid, we expect that person to take full-responsibility and own up to it so we are not damaged – the most valuable resource we know of is information – we cannot afford our company-consciousness stream to be polluted (at SBC in the O’Connor days this was called the “I’m the Idiot” speech).

Often, in any case, these are also the best opportunities to learn which is why it is important for people to be honest and responsible.

Thus the company policy and culture is to reward people for having defensibly good ideas and reward them to a high level for successfully implementing those ideas. This has led to what we would term a 4th Generation Organisation (cf. 4th Generation

Warfare) – it allows us to have impact on a global scale with a very low cost base. We can compete with larger organizations and we can adapt quickly in areas where it would seem we may not be able to compete directly.

A council following some of these suggestions may see significant improvement in the quality of ideas gained from the local community and implemented with community support since attribution for the idea will be publicized.

Business Case for Texxi in the United Kingdom

1) A relatively tiny initial cash investment compared to capital infrastructure projects such as road and rail networks
2) A small time horizon to realise return on investment
3) Network Effect Driven – the more people that use it, the more useful it becomes to all
4) Works best in highly urbanised environments but can still be adapted to rural environs
5) Promotes social inclusion, corporate eco-responsibility, sustainable development while reducing CO_2 emissions.
6) Can increase the amount of money a taxi vehicle operators makes
7) Can reduce the per trip cost for passengers
8) Can reduces the number of vehicles on the road per person carried
9) Can result in a tangible reduction in rush-hour traffic
10) Can supply a revenue stream for a council to invest in traffic flow projects
11) Makes all businesses able to attract more customers from a wider area.
12) Is a demand adaptive travel system whose

What is Texxi?

Texxi is a Demand Responsive Transit (DRT) Brokerage System, enabling dynamic ride-matching and customer aggregation in real-time using users' mobile phones as system interaction interfaces. It is also an Energy Efficient Transport System.

It allows users to text their travel requests to a central system using their mobile phones and be aggregated into a vehicle which can fulfil their transport request with other travellers who have compatible itineraries.

A Texxi scheme requires only marketing investment, which can be recouped from profit share from the scheme itself. No additional infrastructure is needed to be built. Existing mobile phones and vehicles can be used from day 1. Later more complexity and additional features can be added to the system as mandated by the needs of the local community a particular Texxi scheme serves.

Sustainability Issues

Transportation is a huge source of greenhouse gases, accounting for around a third of a nation's carbon dioxide emissions.

Managing our response to Climate Change in the 21st Century situation may become one of the greatest challenges to humanity if we want to make the transition with as little disruption as possible.

Methods and processes of energy conservation will become more and more sought after as we approach the limiting use of oil production.

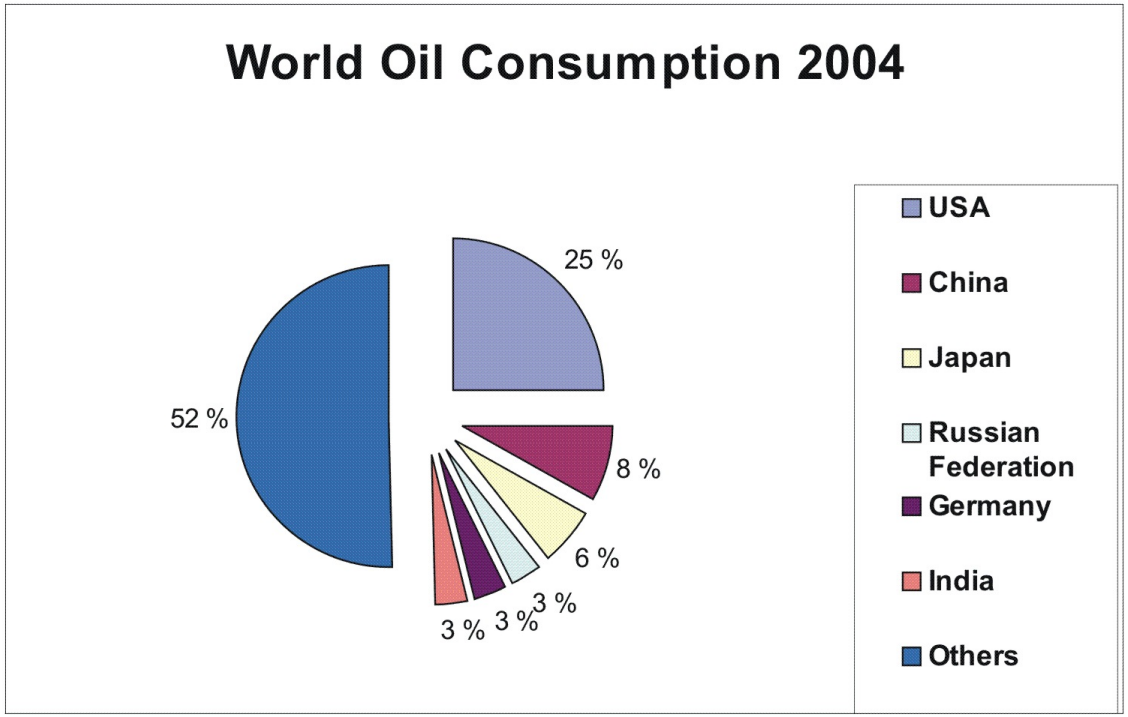
By measures as simple as enabling more private vehicles to carry more than one passenger, road congestion and hydrocarbon fuel use can be reduced measurably. Combined with other initiatives such as High Occupancy Vehicle Lanes (HOV lanes) on motorways and major roads, a Texxi system can enable people to choose an altogether more eco-friendly way to get to work.

By some measures global oil production has peaked and it will now become increasingly difficult to find new reserves. Accordingly even if we do have a lot more oil left than is being claimed, it is in the interests of energy companies to restrict supply to keep up their margins. In any case, advanced western economies which are so dependent on oil for almost all the basics of modern life are susceptible to interruptions in demand.

Thus it would be sensible, while we still can, to invest in systems which conserve as much of our hydrocarbon reserves as we can so we can find alternatives to petrol for automobile use.

Furthermore, road building is an activity fraught with risks and by itself it has not yielded better traffic flow on our road system. We need to travel smarter with what we have before we build more roads.

[WHAT PROPORTION OF A NATION'S ENERGY IS SPENT ON TRANSPORT AND LOGISTICS]



Source: "Statistical Review of World Energy 2005",BP.

Energy use, Peak Oil, known Energy Reserves

"The scarcity of energy supplies and the energy imbalance between nations is a threat to our prosperity and national security. As resources contract, oil-hungry economies will compete for dwindling supplies of hydrocarbons. Competition for fossil fuels will increase.... Energy resources have long been a major strategic concern: access to secure sources, control over supply lines: these are issues of national security.... The energy challenge is now more pressing than ever.... Global oil production is apparently nearing its peak.... current estimates seem to be converging on some point between 2010 and 2020.... [there] are five factors which are changing the energy landscape: rising demand; dwindling supply; greater concentration of resource in the hands of a few; limited

spare capacity; and the environmental impacts of energy use.....**This is not a problem that can wait ten years**."
Sir David Manning, British Ambassador To The United States Of America
Speech at Stanford University, 13 March 2006

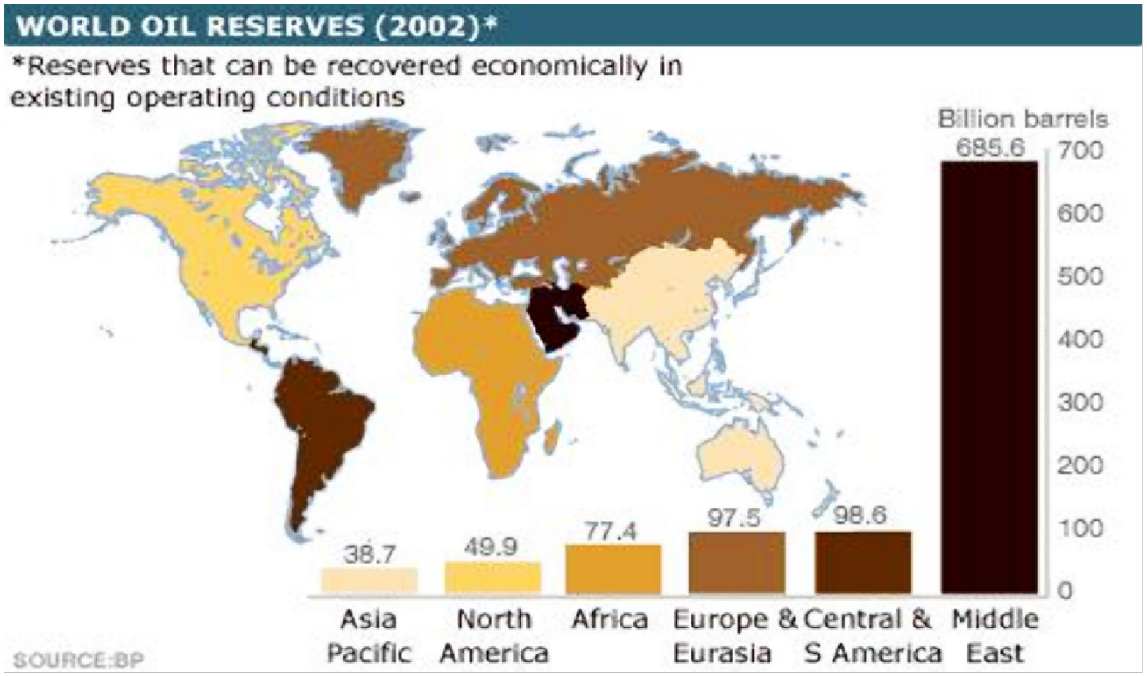
Congestion

Reducing congestion on the inter-urban trunk road network and in large urban areas is a high priority for the Department for Transport; it was one of the Department's Public Service Agreement targets in the Spending Review 2000... According to the Department for Transport, by 2015, total traffic on the roads will have grown by over 30 per cent compared to 2000 levels. Traffic growth on this scale will be a strangle-hold on the urban environment and will cause gridlock on many of the nation's most important strategic routes. A reliable strategic network is key to the efficient movement of goods and people around the country. Although motorways and trunk roads make up just 4 per cent of the UK's road network, they carry 67 per cent of road freight. Urban areas should be busy and bustling places with strong economic centres that attract people from the surrounding area, but severe congestion can damage a city's vitality and prosperity. Research funded by the European Union found that environmental and social sustainability deteriorates in cities if no action is taken to control growing traffic. An efficient road network is seen as crucial to the economic performance of the UK. According to a survey by the CBI, over 85 per cent of senior business people believe that investment decisions are influenced by the quality of transport, and almost 70 per cent consider the UK's transport system to be poor. The CBI has estimated that road congestion costs the UK up to £20 billion per year...
Extract From Select Committee on Transport Seventh Report
The United Kingdom Parliament
24 March 2005

Road Charging

Road Building

Social Exclusion



What is Demand Responsive Transit (DRT)?

A local transport service tailored to passenger needs, operating not unlike a taxi service. Usually provided where there are infrequent bus services, such as rural areas.

Demand Responsive Transit or Demand Responsive Transport fills in the space between private transport initiatives (such as the private motor vehicle) and mass public transit (buses, trains).

Texxi aims to take the concept of DRT further, making it the primary form of transit choice for millions of people in cities across the world.

The benefits of a wide-ranging and comprehensive DRT system are clear for a city on a variety of levels.

In addition to parallel developments in other paratransit activities, a citywide Texxi system can allow things to happen that presently may seem impossible.

The effective “transit density” of an area can be increased without building new roads, just by allowing people to be packaged into vehicles going in the same direction at the same time. To reduce the physical tyranny of open space, Texxi can link up (through the social networking site Texxi Groups- www.texxigroups.com) people who share similar interests even if they live many miles apart and do not have access to private cars. With a Texxi scheme, they can congregate cheaply and easily without relying on any one person’s schedule.

This can and will be applied to lift-sharing for a large set of neighbours who may like to carshare but the cannot guarantee the reliability of any one of the people in the chain or their motor vehicle (which could break down and thus inconvenience several people). If someone, who is the designated driver for the day has a mechanical breakdown or is ill, others are inconvenienced. By effectively offering to each and every participant on the same level a large set of possible transit partners and a huge fleet of vehicles, this risk is minimized.

“In the tyranny of physical space, an audience too thinly spread is the same as no audience at all.”

From a social inclusion point of view, this is groundbreaking.

Specialist leisure applications (such as indoor ski centres, arthouse cinemas and special interest clubs (Rock, Indie, RnB)) may in the current environment prove to be uneconomical to run in certain areas since there may not be the concentration of people in the locality to justify the investment. A Texxi scheme (or a Texxi HLT Cloud) effectively eliminates this economic barrier, because now people can get to places without having to run an expensive car or pay significant transit costs. This will help populate areas away from public transport links and give people more choice about where they want to live.

Some areas may prove difficult to attract people to, because there aren’t many young people – Texxi HLT Clouds eradicate that problem.

History of Texxi in the United Kingdom

Over the last 8 months (January 2006 – September 2006) in Northwest England, Crane Dragon has attempted to implement a Texxi Cloud in Liverpool as a test bed city. There was no interest or support from the City Council, nor was there any reaction or support from the local press. This was in one respect surprising this since Liverpool has been awarded European Capital of Culture for 2008.

We commissioned different types of marketing to test which modes yielded the best results in obtaining user acceptance of an absolutely brand new way of travelling – this included psychology, public relations and co-branding as well as billboard hoardings, flyers, radio broadcast and in-club diffusive media such as projectors. The marketing reviews covered areas as diverse as active and passive informational activities through to how detailed information affected the users' choices and trying to break the psychology of travel habits and the best time to send the information to users.

We developed a marketing test framework to roadmap the development of strategies and tactics to support the application of the Texxi Cloud System technology, and to consider how a Texxi cloud might shape businesses in the longer term (Virtual City Concept).

We produced a set of concepts (detailed further in the appendices) that provide a range of credible and coherent pictures of the amendments and enhancements to the Texxi technology we might invest in, and how society might react to those investments.

So far the "Texxi Liverpool Project" has provided:

- A view of the future of real-time On-Demand Transport other than the Private Car in a modern UK city and an exploration in the scenarios of how we might deploy those technologies to co-exist with other transport modes.

- An understanding of how best to use DRT Brokerage Technology to deliver more choice to consumers in cities.

- A view of the opportunities and challenges that real-time DRT Broking delivers and what the constraints on service

uptake are.

- An understanding of the presumptions that underpin the decisions on which mode of Texxi to deploy and with what marketing.

- The strategic choices that UK cities face, along with most other societies.

Texxi Cloud System Technology capabilities of the future

Advances in our technology could provide us with:

- Predictive Broking – we can SMS (text) users ahead of them needing a vehicle resource based on their itinerary histories (with opt-in consent).

- Information so that individuals and those delivering transport-based services can make better informed decisions (mobile transit maps based on ***systematic*** time-domain analysis of real-time road conditions; *Manchester may be only 30 miles away from Liverpool at all times of the day in the "Spatial Domain", but in the "Time Domain", Manchester is further from Liverpool at 0800 -1000 than at 22:00 – 06:00.)*

- The ability to manage the delivery of the services in real time, through the collection of information on the origin and destination of the user and real-time predictive modelling on a very large scale

- The ability to control the movement of goods and people, with vehicles connected to each other and to the surrounding infrastructure so they become an integral part of an 'intelligent' system (see HLT Cloud Concept)

- Infrastructure that is intelligent, so that it adapts itself to the needs of users - an integrated system that includes all modes of transport, public and private.

- Integrated and intelligent supply and logistics chains that adapt continuously to provide the most efficient path from supplier to user (Mobile Transit Maps)

- Viable alternatives to moving goods and people (See E-Commerce Enabled Demand Responsive Logistics).

In the Texxi Cloud System, a distributed network of sensors is provided by mobile phones and GPS triangulation.

These allow us to effectively collect data on the position of just about anything and everything related to Texxi and allow us to monitor the flows of people and goods within the Texxi cloud

Data mining
Software which could analyse masses of data collected from monitoring the whereabouts of people and objects. It could detect patterns that allow us to understand the behaviour of complex systems.

Agent-based software
Lotus Domino software agents have become the modern electronic equivalent of the butler,
executive assistant or **broker**, taking instructions and venturing out into the connected world to perform various tasks on the user's behalf. Add-on services like "Texxi-tell" can inform loved ones when we board and debus from transport resources or if there are any of our friends going anywhere we may be interested in going at specific times.

Advances in communications technology
The speed of transfer of information will continue to increase and its cost will further drop. In South Korea a technology called WiBro allows WiMax type connectivity to vehicles moving as fast as 60kmph.

How will Texxi benefit my City?

Texxi has the capability to

1. Reduce traffic congestion in cities
2. Reduce demand for road-building
3. Reduce hydrocarbon fuel consumption and hence CO2 emissions
4. Prevent marginalization of segments of a population based on socio-economic demographic constraints
5. Allow people to choose where they live and know they can access the full range of services a city has to offer
6. Change the way urban planners approach city and community design with a view to increased sustainability.
7. Implement Energy Conservation initiatives based on incentives for High Occupancy Vehicles and lower polluting fuel choices
8. Mesh with other forms of Transit Scheme such as ZipCar or FlexCar to provide the best possible array of choices for community based on their needs
9. Adapt every day, based on patterns of demand, to a specific locality.

What else can Texxi potentially do?

Texxi Concepts

1. HLT (Hospitality, Logistics and Transportation) Cloud

Consider a city to be a closed system. If a city's main actors responsible for increasing external actor spend within the system collaborated efficiently, how would they do it?

(Consider that money is energy and that the amount of money a city is attracting externally is its temperature).

The answer is that there would be a scheme that all the hotels and business in the leisure districts would contribute towards providing to whisk travellers from the seaports, airports and railway stations to the spend points as quickly as possible. This happens in Prague, Czech Republic already. A fleet of VW Transporters takes any and all tourists to anywhere they want to go in the City Centre for a fixed low flat fare.

In this model, the Hospitality, Logistics and Transportation Industry actors are aligned in their objective to provide a pleasurable, well-priced and efficient service to new visitors to their city. This benefits them all, since no normal person goes to city just to try out the taxis (except perhaps officers of Crane Dragon). The taxi operators make a good living since a lot of tourists come to use the hotels / bars / special leisure applications (specialist clubs, indoor ski slopes, theatres, art house cinemas). The logistics industry has more business if there are more tourists – more need for goods and services etc. It is essential that these 3 industry actors are integrated to provide for the best possible experience for all newcomers to the city.

We know where users (potential users) are. We can predict with algorithms and models where users will be and based on rolling data gathered, we can even place those vehicles magically ahead of demand, once detailed and dense “Demand Maps” evolve. There is therefore no need to have buses driving around mostly empty when no-one is using them. The year after all is 2006 not 1806.

A **HLT Cloud** is a concept which emulates that of National Postal Services or the Internet. The Texxi Cloud System will allow a user to summon a vehicle by using a device (a mobile phone) to allow for real-time transit fulfilment. In effect the user can “address” and "send" himself/herself just like he/she may send a letter or email.

In the National Postal mode, users put a letter into a post-box after having addressed it and paid the postage. With the internet, email documents are addressed and sent via the worldwide web cloud. With Texxi, users address their destination and then get picked up by the nearest available vehicle.

What problems this solves:
Any business can be sited almost anywhere in an area now. Each business does not now need to invest in buying a new vehicle to move their goods. This is effectively E-Commerce Enabled Demand Responsive Urban Logistics. It can allow businesses which do not need large shop frontage to still be profitable even though their business operations may be sited some miles away. It will reduce clutter on the high street.

What other innovations can be applied:
Flower deliveries (at a fraction of the cost of a company like InterFlora)
Dry Cleaning deliveries (drop off anywhere, pick up from anywhere)

Small package deliveries by Taxi.

2. Virtual City

Imagine a city where one of the most important services (On Demand Transit) is catered for by not one centralised company but by a network of actors all providing "bandwidth" (think of all those screensaver programs helping us crunch DNA or analyse deep space signals).
In this case the "bandwidth" is "transit resource availability" and is provided by local operator firms or individual hackney cabs. This reduces risk and as long as there is a minimum fitness criterion applied, keeps up the standards for all involved.

A site can operate without having to build a logistics system - Royal Mail, Fedex, DHL provide all those functions and services.
A site can operate without having to build banking and on-line payments systems - 3rd Party Providers allow for that.

What problems this solves:
The "Virtual City Concept" will allow people who live in semi-rural areas with no large cities (most UK counties in fact), to effectively have a very reliable, robust transportation system without relying on huge government funded transportation schemes. It also links up villages into a large “virtual city”.

What other innovations can be applied:
Tourism Site Visits from Railway Stations.
Leisure Days Out for families at lower prices.
Social Inclusion for activity partnering (Imagine a group of rock climbers, skydivers, snowboarders wanting to go to an X-Scape leisure centre. We can aggregate dispersed audiences to make the value proposition for a large centre like X-Scape more compelling).

3. Virtual Private Travel

What problems this solves:
Preventing people who are trouble makers causing annoyance to law-abiding travellers who then avoid public transport. We can enforce virtual privacy on shared transit resources. Travel only with a class of person you want to.

What other innovations can be applied:
School Grouping Travel - Safe Travel for Children at Peak Times (Virtual School Bus)
Supermarket Run for OAPs
Days out for Disabled Groups

4. On Demand Aggregation

Virtual Car Parks

Paint a field and allow parking wardens to check enforcement with handhelds with cameras (we have this application written). Also allow people to check for parking availability BEFORE they set out in a private car so they can make an informed choice of what mode of transport to use. The less hassle people have getting to a shopping area, the better for all businesses.

What problems this solves:
Allows a council to create dynamic parking zones and areas and enforce them as effectively as fixed contract parking meters with nothing more than paint

What other innovations can be applied:
Special Event Zones
Variable Rate Parking (all changeable on-the-fly by software)

Historical Reasons Why DRT Systems have had low uptake

In conclusion, this study of failed DRT systems indicates a series of factors that are crucial in whether a DRT service succeeds or fails. It needs to be realistically priced and designed with a full understanding of the market it is to serve.

There is a very dangerous temptation to offer too flexible a service and to include costly technological systems, when they may not be needed. An incremental approach, if possible, appears sensible.

DRT also requires more marketing effort and skills than is traditional in conventional bus operations, but above all, it requires new skills in working in partnership. It is the latter area where the root of DRT failure is often to be found. The examples of failure reinforced the conclusions of the Intermode study as a whole as to the planning and design needs of DRT services. There is a need for a very good understanding of the DRT market to be served. There appear to be three general market niches where DRT is appropriate.

First, low tech, small scale simple DRT systems can be applied in areas where captive users are happy to use any form of public transport but are only willing (or able) to pay low fares.

Second, there are niches (e.g. employer shuttles, airport shuttles) where commercial operators can target choice users with small scale simple to operate systems who appreciate luxury and are
prepared to pay a premium for a service that is as far away from a bus or a minicab as possible.

Finally, large scale, complex network DRT systems require high tech equipment if they are to operate efficiently. As a result they will be relatively expensive to operate. However, providing that savings can be made (usually by substituting even more expensive specialist transport) there is scope for these services to be cost effective - particularly if fares can be raised above those of a comparable bus service.

From a Paper for the 85th Annual Meeting Of The TRB 2006
“WHY DO DEMAND RESPONSIVE TRANSPORT SYSTEMS FAIL?”,
Dr Marcus Enoch, Dr Stephen Potter, Dr Graham Parkhurst and Dr Mark Smith

How an implementation of a Texxi Scheme addresses historical uptake problems

Texxi has been created from a relatively simple platform with Rapid Application Development Techniques. This minimised the upfront costs while allowing the developers considerable scope and flexibility to upgrade system capabilities later.

The costing for the yearly license has been worked out to be about 1/20th of the realistic cost to an organisation / council of constructing a comparable scheme to a basic level (see appendices)

The adaptive coding design system allows us to add more complexity in an incremental, layered fashion to avoid the standard information technology trap of trying to do too much in any one phase. The designers of the system have had this experience with numerous corporate, investment banking and hedge-fund projects.

The whole concept behind how we have promoted the Texxi system was based on viral methods and getting the message out at little to no cost. By the very fact that councils who we have never contacted have got in touch with us (across the world) we can mark this approach as vindicated and validated. It is very similar to 4GW tactics, in that we look for allies to tactically implement an agenda which suits us as well as it suits them. The “large enemy” of complacency (“if it ain’t broke, don’t try to fix it”) and statism can only be defeated by asymmetric “economic warfare”.

We set out to be a broker – we do not need to own the plant we use.

The Virtual Private Transport (VPT) aspect of Texxi allows us to offer a spectrum of services to a economically widely dispersed group of consumers. We can offer high-end luxury to the more affluent and unter-cheap to the mass market.

Finally, we the entire system is predicated on a scalable franchise model. We have no technological constraints on where and how we can operate. With a minimum of manpower we can serve 100 cities/locales almost effectively as we can service 10. We have economies of scale on an enormous level.

Demand Mapping Exercises

Ask a baker what the best food is and he will say “bread”. Ask a butcher and you may not be surprised to hear “meat”. Get the opinion of a greengrocer and you will hear the benefits of vegetables extolled.

The same is true for promotional activity. Billboard sales folk pitch Outdoor Media. Vehicle advertisers harp on about the benefits of mobile media. Field Marketing Agencies insist you will need person to person contact and Radio Broadcasters absolutely claim to be the medium that reaches the most people.

In truth, there is a combination of marketing activities to undertake, but the most effective ones may vary from city to city. It is therefore prudent to undertake a mapping exercise before committing to large marketing spend in any specific medium.

For a new scheme which requires people to do something they have not done before, we will need to involve promotional staff early on, with printed materials.

Despite the revenue share from the franchise operation, there is also revenue from licensing and merchandising. Sales of "Aggregate Data" - to marketing company.

What sort of demographic is going where, doing what and when? This will help a council plan for new services and systems.

Demand Mapping Extract

Subjective Indicators

If the report is being prepared in response to an interest then the data gathering exercise will follow subjective indicators

Which specific satellite towns might be of interest around the central area of the Demand Mapping Exercise might usefully be incorporated into one franchise area for the various modes?

Inter-Franchise (or external feed to franchise)

Franchise in-feed. Does anybody believe that people would have an incentive to come into the franchise area from even further afield for any reason. In particularly, where they may benefit from transport other than a train.

Applications

Are there specific applications to consider.

Full Existing Taxi & For Hire Fleet Assessment

Number of Hackney Carriages.
Number of Private Hire Vehicles.

Full Current Driver Assessment

Number of licensed drivers.
Male/Female.
Night versus day drivers.
Approximate shift times
Type of licences on issue: dual etc.

Existing Infrastructure

Current taxi ranks
Marshalling
Security provisions (if any)

Policing

Relevant Police policies on transport in terms of areas
For example (police are trying to encourage people to move away from certain areas at certain times and we choose to put a meeting point there)

Other Transport

Other transport provision.

Buses:

Routes and happiness with provision

Train stations:

Location Map.
Volumes of passengers.
Profiles of passengers.

Airports:

If there are no airports - which airports do people use.
Do they fly often?

Businesses

Business types and locations. Map based plot of entire area.
Ages of people attending these venues.
Types of people attending these venues.(girls, boys, punks, rockers etc.)
Arrival & Departure profiles for each venue. Numbers and type of person arriving **and leaving** and at what times.

Schools & Education Facilities

Location. Map based plot of entire area.
Ages of people attending these institutions
Times they attend these institutions
Cyclical timing profile
Daily timing profile.

Theatres & Cinema

Locations (mapped)
Profile
Type
Showing times
Volumes in/out and what times.
Desires

Sports Facilities & Clubs

Number
Location (mapped)
Facilities
Volumes in/out and what times.
Desires

Shopping Facilities & Locations

Location
Volumes of people

Big Event

Named Big Events in the area. Non-regular events with more than 10,000 people.
Locations of Big Events
Time of Big Events

Big Events subject to separate analysis.

Tourist Figures & Estimates

Tourist attractions.

Museums
Monuments (incl. churches)
Beaches
Places of historical Importance

What draws the tourists?
What time of year?
Sample visitor profiles.
Desires

Postcode Areas Under Consideration

Geographic sizes. Split to the level of district:

L15 0
L15 1

Existing Fare Structures

Metered single fare (plus minimums) to the centre of each postcode in question from the any proposed area mapped as suitable for a meeting point.

Time taken to the centre of the postcode

Breakdown of fare (include tolls)
Note any breaks on route – such as a tunnel that must be queued at.
Bottlenecks that are busy at certain times.

Include late night fare and timing and daytime fare and timing.

Any additional rules or regulations in effect that might be of note.

Residential Areas

Average house price and variance within each postcode block.
Average housing size.
Council Estates or supplied housing

Viral Meme Propagation

We have used the power of viral marketing to achieve global awareness in under 6 weeks from naming the Texxi concept. We have a pair of very talented film producers who have an extensive network of assistants, gaffers, grips and camera people to create our viral films. These films were distributed at almost zero cost. So far we have even seen members of the CIA download copies of our videos from our site.

Validation of Assumptions

Nothing must be accepted as true unless it meshes with empirical observations following deployment of resources and capital. Following the 9 month trial in Liverpool, what was noticed was that;

- Most people will not try anything new of their own accord – they need leaders and demonstrators – they need a “Judas Goat”
- Most people are naturally incurious – a new message has to appeal to base human instincts of fear, greed and sex.
- Our media will have to compete with many other media messages – we have to be smarter than other advertisers. “Shouting” is not enough.
- Different marketing types appeal to people from different age groups, education levels and income levels

The Texxi Franchise Model

Franchisee

The Texxi franchise model has been created to allow a council to partner with local businesses and individual pillars of the community in a particular locality to help produce solutions to transit related problems.

No one organisation (a private company or a council) has the necessary resources or capabilities to implement a fully fledged Texxi scheme alone. In the initial stages of Texxi deployment, there is a necessity for the establishment of coalitions with aligned interests in the target locality..

Underpinning the whole endeavour is the Demand Mapping Exercise.

Texxi believes in creating dynamic partnerships, in which all groups are empowered and contribute their own time and resources, to help ensure from the outset that everyone involved has a vested interest in achieving success. Texxi attaches great priority to working with local organisations, as this means solutions are most likely to be tailored to local conditions. This is why we insist on contribution from local councils and other community leaders. Everyone who contributes gets a share of the results; hence the mantra “Equal Reward for Equal Risk”.

This dividend structure also allows for accountability and may even remove many barriers to achieving a successful implementation. This is why the Demand Mapping Exercise is so important.

Crane Dragon has made Texxi available as a scheme on an international basis following the franchise model.

The Master Franchise Owner, Texxi National has a responsibility to its customers to ensure;

I. that the business continues to be run in an efficient, adaptive and competitive fashion remaining responsive to its customers’ needs

II. that since transport often has different dimensions and requirements (peculiar to the locality), monthly local liaison meetings with councils, local businesses and residents in the area will take place in order that it continues to be run to the benefit of the local community.

III. that each stakeholder in a Texxi system is transparently accountable to the others and can be replaced if performance is not up to standard

IV. that the quality of the Texxi experience (and hence the brand) is not compromised. Texxi National has to protect the brand and if it deems that there is not the necessary willpower / expertise available at local level, there will be no franchise until this can be found

There is a scoring scale (1-10) applied to each element of the Texxi system stakeholders. This will allow Texxi National to attribute subjective scores to such metrics as Council–Police integration and local business interest.

The normal method of scheme introduction will be to assess the strengths of various consortia of management teams and partners who want to run and support a Texxi franchise in a given area.

In order to minimise the time taken to implement a Texxi system into towns and cities across the UK we will approach each council / local authority in the UK with an offer to set up the local franchise entity ready for business and have Texxi Central Operations run it to begin with.

Councils / Local Businesses / Community Stakeholders will then have an incentive to invest because an operational Texxi Scheme can deliver a number of tangible, rapid benefits while precluding the need to set up other costly, risky transport schemes. The incentive to the stakeholders is augmented with the lure of a participatory dividend in the actual scheme.

Proposal

We will contribute the first years franchise fixed fee (£50,000) to Milton Keynes for the “Evening Economy” mode.

We will contribute that Texxi will run the franchise (performing all tasks that the local franchise entity would need to do under the franchise agreement) for as long as is necessary or as long as the franchise is financially viable.

We anticipate that the council/partnership group or other will contribute to the franchise the cost of the Demand Mapping Exercise and/or Demand Mapping Report. This contribution can be in the form of hard data as well as cash.

We anticipate that the council/partnership group or other will contribute to the franchise the cost part of the marketing

We anticipate that other groups will add other services such that the sum total of the franchise proposal would meet our normal requirements.

We anticipate for certain further cash injections the local franchise entity will share some of its revenue with the investing parties.

Any "investing party" will have sight of the franchise agreement between Texxi National and Texxi Milton Keynes.

Any "investing party" will see an agreement governing the money invested and details of the revenue / profit share from scheme operation.

Any "investing party" will receive assurances that the franchisee would endeavour to keep the franchise operating to the best of its ability. There is also an undertaking by Texxi National to remove an under-performing franchisee and appoint another.

There will be scope for "staged investment" for any "investing party" (structured much like a venture capital finance agreement such that there are bonuses if the scheme uptake exceeds certain pre-agreed targets) whereby more marketing money will be injected at a specific stage.

1.

Suggested Outlay £35,000

This will be to pay for

2.	Licence	(waived)	(£0)
3.	Ongoing Marketing	(including Promotion Teams)	(£25,000)
4.	Demand Mapping	(one-off)	(£10,000)

Assuming Milton Keynes is the first council to sign up in the United Kingdom Territory, this will result in a 25% revenue share for the stakeholders of the "Texxi Milton Keynes Franchise" from all Texxi revenue from the Milton Keynes area operation.

What we will need from Milton Keynes is

- Access to local press (newspapers and radio)
- Access to screen at X-Scape in the evenings on which to play our "informercials" (The BBFC has now given us a rating)
- People to hand out flyers (the Police can become involved)
- Commitment from local authority / Police to help in moving around the Taxi ranks.
- Bannering and signage space around Milton Keynes
- Help to publicise this in Government and in the National Press (see Appendix for details of incentive scheme).

Sliding scale of Incentives for Councils / Local Authorities

Global Franchisee Owner Rewards Program - Early adopter

The following will be true for any and all councils in each National Territory globally.

Following the receipt of a signed "Letter of Intent" from a council to implement a Texxi Scheme with full local support (Police, other authorities) pursuant to the terms of the Texxi Franchisee agreement we will do the following.

Sign Up Order	Free Modes	Yrs	Time	Max %	Annual Ongoing Marketing Investment required per 5% of revenue share (GBP)
1	Any 5	2	12 months	50	5,000
2	Any 3 (Council Determined)	2	12 months	50	7,500
3	Any 2 (Council Determined)	1	6 months	30	10,000
4	Specific 1 (DMR Determined)	1	3 months	25	12,500
5	Specific 1 (DMR Determined)	0	DoE*	25	15,000
6	0 (DMR Determined)	0		20	16,000
7	0 (DMR Determined)	0		20	17,000
8	0 (DMR Determined)	0		20	18,000
9	0 (DMR Determined)	0		20	19,000
10+	0 (DMR Determined)	0		20	20,000

e.g. Assuming Council X signs up 1st , for a £30,000 investment towards marketing, we will make available 30% of the revenues from the scheme to the council. For £10,000, there will only be 10% available.

The Texxi scheme revenues for the Franchise Owner (Texxi National) will yield approximately £5,000 a week if 100 hackney cabs perform 5 trips per night each on Friday and Saturday 80% occupied.

For a council in band 1, £50,000 invested would yield £2,500 per week (£125,000 p.a.) from a revenue share.
The 2nd council to sign up would need to invest £75,0000 to make £2,500.00 per week.
The 3rd council to sign up would need to invest £60,0000 to make £1,700.00 per week.
The 4th council to sign up would need to invest £50,0000 to make £1,000.00 per week (Cost Neutral - if they went for 50%)

NOTES:
DMR is a ***Demand Mapping Report***. It is the output of a ***Demand Mapping Exercise*** (DME).
Revenue Participation is a function of yearly marketing re-investment.
For the very 1st council in a country to sign up, there is a reduced marketing participation mandated in order for the revenue share to take place.

The amount of the revenue share (calculated from the Texxi Cut) is dependent on the upfront investment provided by the Partner (Council, Corporate)

Up Front Costs to a Council / Local Authority

£50,000

Recurring licence fee per year per mode*
Council entitled to up 50% share of revenues (dependent on their yearly initial up-front investment + rewards scheme placing) if they help market scheme, which may well yield more than the licence cost.

The mode implemented is determined by the Demand Mapping Exercise DME.

Up to £50,000

Cost for boost marketing provided by designated Texxi Field Marketing Partner.
This will supply up to 6 months per year of teams of 5 trained marketers on the streets of a city. This will include a certain amount of collateral provided at low cost by Texxi National (Flyers, Banners, Umbrellas, T-Shirts, Mugs**)

Encouraging people to use the system. Field Marketing and Promotional Activity provided by marketing partner, e.g. N2O (www.n2o.co.uk) or other.

Revenue Share
A share in the revenue (time limited), based on the initial yearly up-front investment
Up to a maximum of 10%.

Marketing Cost Share
Ask local historical sites (such as English Heritage)

Up to £50,000

One time Demand Mapping and Adjacency Matrix Calculations / Surveys on the City.
Combination of 2 teams of 2 operatives working over a 6- 13 week period mapping the city and locality, placing flyers in bars etc.
Input from a Field Marketing Consultancy to provide

- Surveys on uptake
- User price tolerance
- Marketing Research
- Risk Assessment
- Price Band Setting

**Texxi National will run Billboard and Radio campaigns in the local area to support the initiatives. As more councils become involved, there will be greater resonant effects from marketing activities.

Marketing plan

The marketing Plan will make use of the results of the Demand Mapping Exercise. There is no way this can be assessed correctly until the DME has been completed or at least 80% of the basic questions have been answered to the satisfaction of the Texxi National Franchise Operations Manager (Matthew Burden)

APPENDICES

Appendix A

The 7 modes of Texxi transport

Evening Economy

This is a mode of operation where we aim to bring people back from nightclubs and bars at times when transit resources are otherwise limited.
This is actually a very efficient mode of operation in that the peaks are over a 3 hour spike. Better still, the utility of the scheme will be immediately apparent to stranded, shivering potential travellers at closing time especially in Northern latitudes in the winter to spring months.

Adoption of this mode is likely to be led by young females and concerned parents of 14+ yr olds.

Further support will come from City “NightSafe” groups, concerned with decanting large numbers of people from UK City Centres back to suburbs in the most efficient manner.

Corporate

This scheme will allow large corporate companies to encourage their staff to rideshare on demand as little as 15 minutes before time.
This enables work to and from a large corporate site to be efficient for the largest number of people, especially when there are sites dispersed away from public transport systems.

This will also allow any and all people more access to jobs in a particular area.

Additionally, for a fixed price, a corporate company can be sure of a certain minimum standard of vehicle for up to a certain number of people per day. This will enable the corporate to effectively have an on-call virtual fleet for its operations 24 hrs a day, 7 days a week.

Nightshift workers can benefit from this mode of travel and it will add a larger amount of staff choice to the bar and club industry over who they hire.

The corporate company in question will benefit from this as it makes available to that company a larger catchments area and thus a larger pool of people from which to select staff.

Smaller bars and clubs now also can join together to create a “virtual corporate” in order to guarantee for a small amount of money that their staff can get home quickly and easily.

Commuter

For people who do not work in the same firm, but work in the same district and have to get there from similar postcodes or from an easily reached central transit point.
This happens in Connecticut and Upstate New York already.
Again, Mercedes Vianos / Renault Espace will be the vehicles allowing people to get to work in comfort and style.
NHS Nightshift workers can benefit from this mode, especially with a Virtual Private Travel (VPT) mask applied.

Shopping

People who live far from a supermarket or shopping centre can now get there without having to rely on others or on purely public transport.

In Upstate New York and Connecticut, it is very difficult for those without a car to go to a shopping centre.

e.g. OAPs (senior citizens) needn't terrorise themselves or others - they can share transit resources to and from the supermarket.
Younger citizens without cars can now get to out-of-town shopping centres. This will also prevent social exclusion of the less affluent (like single mothers) to perhaps cheaper areas.

School Run

In this mode, the system groups school children from a particular area into vehicles going from one area to a school.

This would eliminate rush-hour traffic jams filled with soccer-moms trying to outdo each other to take their kids to school.

This is in effect a “Virtual SchoolBus”. It will allow children from a certain area to all take the same transport if required and this will not rely on a special schoolbus.

In fact Texxi is to a vehicle what a General Purpose Computer is to a specific state machine (calculator, typewriter) . The “Virtual Schoolbus” would still be a Mercedes Viano / Renault Grand Espace but behaving in a certain mode at different times of the day / year.

Large Event

Summer Festivals and large scale outdoor events.

e.g. Creamfields, Glastonbury, V2, Music Festivals, Glyndebourne, Silverstone, Henley, Cowes, Cartier Polo, British Open.

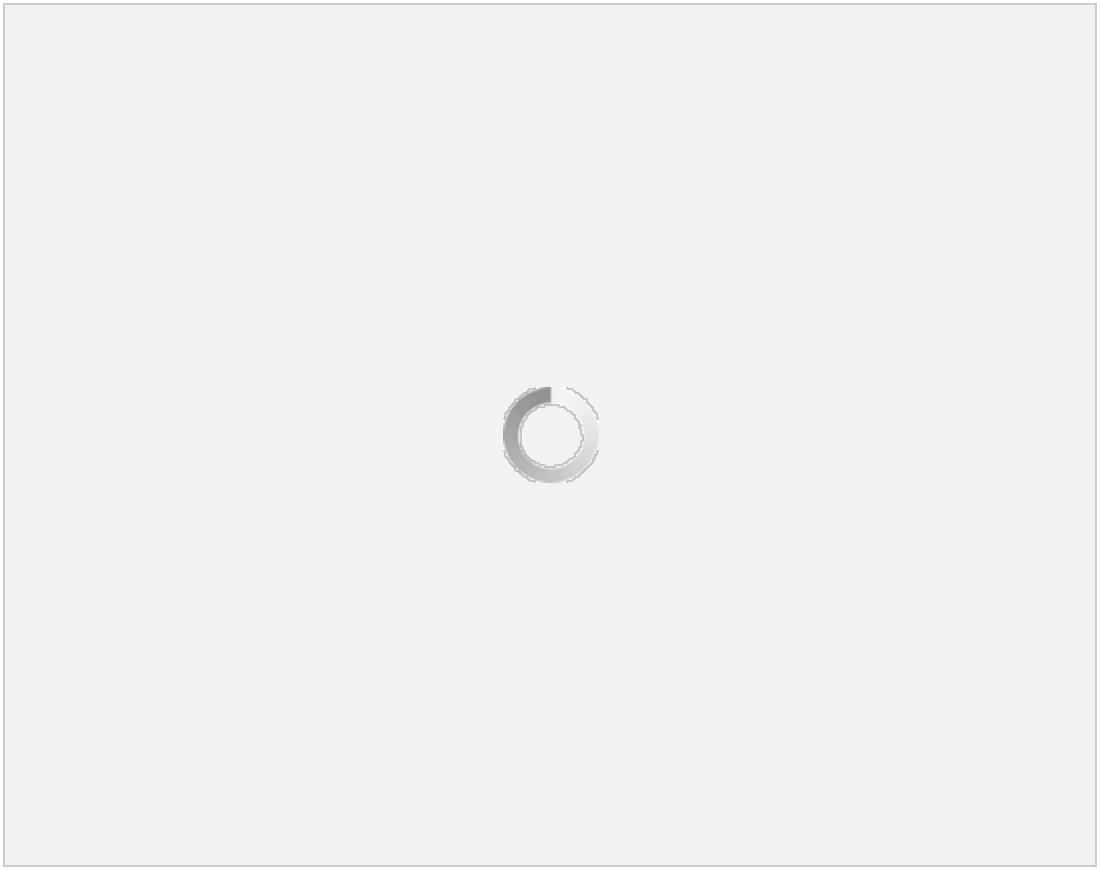
These often prevent a nightmare for local and regional Police. They can also present significant headaches and challenges for the young (and less affluent) who populate such events. A fun way to travel, would be a Volkswagen Type 2 as a festival commuter vehicle. Even better, would be one running on sunflower oil or some other plant extract.

Tourist

Tour Groups with Language operator. This will allow visitors to a city to get a taxi driver in their language if they so request. Even if the driver is not a great conversationalist, the basic greetings can make all the difference to tourists – especially Asiatic tourists – our future.

In Berlin and Singapore, taxi drivers often double as tour guides, offering for a fixed fee to drive tourists around the city pointing out landmarks.

This can be improved on and used to further show visitors the myriad of attractions an area has.



Appendix B

Internet Concepts applied to the Texxi Model

Internet Concept	*Texxi Concept*	*Description*
Net Neutrality	**Logistics Neutrality**	Any actor within the system can make use of any of the Texxi transit resources.
The Internet Cloud	**HLT**	Texxi implements an effective Hospitality, Logistics and Transportation (HLT) Cloud. This is the distributed internet system applied to physical space.
Authentication	**Having a specific mobile phone**	We will know who any person "is" (by token id) within the system. In high risk systems, we can flash up a photo of the person on a handheld so the driver knows who is getting in
Authorization	**Belonging to a Texxi Groups**	People can be prevented from using Texxi systems to enforce Ostraka.
VPN	**VPT**	Groups of people can travel together preferentially and

		without interference from other folk.
Node Redundancy	**Vehicle Redundancy**	There is more than one vehicle. If it breaks down, we can send another.
Routing Algorithms	**Time Domain Mobile Transit Maps**	We can figure out the best time to suggest to people to travel. We can also give them estimates of journey times at different times of day.
Webserver Logs	**Texxi Travellogs**	Every single trip is logged. We can also apply analysis to see where people are coming from and going to at which times – just like for a webserver / “Texxi Cloud” server in fact

Appendix C

Asymmetric Warfare Concepts applied to the User Uptake Model

4th Generation Warfare Concept	*Crane Dragon Philosophy*	*Description*
Bazaar Of Violence / Open-Source Warfare	**Application Innovation by using pre-built components**	Any actor within the system can adapt an aspect of the Texxi system to improve consumer experience. ● **Release early and often.** Try new forms of attacks against different types of targets early and often. Don't wait for a perfect plan. ● **Given a large enough pool of co-developers, any difficult problem will be seen as obvious by someone, and solved.** Eventually some participant of the bazaar will find a way to disrupt a particularly difficult target. All you need to do is copy the process they used. ● **Your co-developers (beta-testers) are your most valuable resource.** The other guerrilla networks in the bazaar are your most valuable allies. They will innovate on your plans, swarm on weaknesses you identify, and protect you by creating system noise.

		• **Recognize good ideas from your co-developers.** Simple attacks that have immediate and far-reaching impact should be adopted. • **Perfection is achieved when there is nothing left to take away (simplicity).** The easier the attack is, the more easily it will be adopted. Complexity prevents swarming that both amplifies and protects. • **Tools are often used in unexpected ways.** An attack method can often find reuse in unexpected ways.
Stigmergic Learning	**Continual observations**	**Stigmergy** is a term used in biology (from the work of french biologist Pierre-Paul Grasse) to describe environmental mechanisms for coordinating the work of independent actors (for example, ants use pheromones to create trails and people use weblog links to establish information paths, for others to follow). The term is derived from the greek words *stigma* ("sign") and *ergon* ("to act"). Stigmergy can be used as a mechanism to understand underlying patterns in swarming activity. As such, it can be applied to the understanding of swarming attacks by diverse bands of global guerrilla. The stigmergic information system that operates in Iraq is the bazaar of violence. A knowledge of stigmergy is a key to understanding how these groups learn.

Open Source Innovation	**Everyone in the Crane Dragon space can contribute ideas.**	**Using our investors as network introducers, leveraged persons with access to Networks**
Long Tail Development	**We don’t need a lot of money to make excellent systems**	We don't need to have the very best or most expensive individual software system component to make a superlative system. We can use a combination less well known (and therefore exponentially cheaper) but just as effective other components.
Innovation Cycles	**We have qualitative advantage in how quickly we can adapt our systems over larger, more bureaucratic organisations.**	By using rapid application development from the outset and not just in the software domain, we can adapt rapidly. All elements of our systems are RAD designed - Network Infrastructure - Encryption Schemes - Hardware Setups - Software - Mathematical Algorithms - Corporate Structure We also design everything as much as possible to be diverse and replaceable.
Value Model	**You perform, you're promoted.** **You don't perform, you die**	**You perform, you're promoted.** **You don't perform, you go out of business.** **We value ideas and execution. No operative is rewarded for just time spent on something. Tangible results aligned with our objectives allow us to identify and retain talent, while churning out underperformers**

Appendix D

Costing Example – 12 month development cycle

Development Costs

3 Developers @ £50/hr	3x £100,000/yr	-	£300,000
1 Project Manager		-	£75,000
2 Assistant Project Managers (50,000)		-	£100,000
2 Testers / Admin (40,000)		-	£80,000
4 Clusters of Servers			
Purchase		-	£32,000
Running Costs		-	£40,000
Offices		-	£60,000
Development Equipment	-	£100,000	
Software & Licences		-	£30,000
Redundant Sites		-	£40,000

Minimum Cost for 1 year £900,000, assuming no holidays, 100% efficiency of all staff, no staff turnover and a “perfect” project where all targets are met.

In reality, a project this complex, will take as much as 18 months, raising the price to £1,200,000.

Furthermore there are other technical specialities required, where consultants will have to be hired.

These will be for

- Search Engine Optimisation
- Graphic & Web Design

- Field Marketing
- Mathematical Optimization
- System Stress Testing
- Infrastructure Disaster Recovery Planning
- Network Support
- Operations Support
- Admin Assistants

This will add another conservatively £750,000 to an 18 month long project.

£2m will have to be spent and that is a very conservative estimate before any system will exist. Such a system development project is fraught with enormous risk

Then there are the advertising costs, the film production costs and the costs for photography. Add another £2m.

TOTAL:	£4m
REALISTIC INPUT REQUIRED (in order to mitigate risks)	£6m

Appendix E

Media Contacts

The Times, Environmental Editor
Jonathan Leake, Environment Editor, Val Elliot
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1 Pennington Street
London E98 1XY
online.editor@timesonline.co.uk

The Financial Times, Environmental Editor
Fiona Harvey
Financial Times Newspaper
One Southwark Bridge
London SE1 9HL

The Guardian, Environmental Editor
Martin Wainwright
Northern Editor
The Guardian Media Group
75 Farringdon Road,
London EC1M 3JY
environment.editor@guardian.co.uk

The Daily Telegraph, Environmental Editor
Richard Tyler
Enterprise Desk
c/o Telegraph Group Limited, 1 Canada Square,
Canary Wharf,

London E14 5DT

The Independent, Environmental Editor
Michael McCarthy

The Economist
Matthew Bishop
The Economist
25 St James's Street
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020 7830 7005

The Sun
Sharon Hendry
Women’s Editor
1 Virginia Street, Wapping
London E98 1SN

Appendix F

Fair Market Value for PR Services Calculations

Starting Date: **5th September 2006**
Share Option Type : 3 year European Calls on Ordinary Shares, £7.50 Strike, Exp March 2009

Angles
(To be agreed as acceptable before scheduling article - one article can cover many angles):

1. Young Entrepreneurs set up business with a Council
2. Traffic Congestion and Transport Solution
3. Alternative to the Congestion Charge
4. Energy and Efficiency (reduction of CO_2)
5. Purely Technical (Algorithms and Methods)
6. Lifestyle (access to a wider variety of social activities)
7. Crime (access and egress) impact / anticipated impact
8. Large event management capability.
9. Disaster recovery capability.
10. Safety for lone women.
11. Disability and social inclusion.

Publication	Article Type	Qualifying Timescale	Equivalent Price
New Scientist	major article	3 months	2,000
Times	major article	3 months	5,000
Independent	major article	3 months	5,000
Telegraph	major article	3 months	5,000
Guardian	major article	3 months	5,000
Sun	major article	3 months	10,000
Red Herring	major article	3 months	1,000
Wired	major article	3 months	2,000

Editorial mentions bonus 25% more
MacArthur Foundation for Sustainable Entrepreneurship (win 5000)