FROM LAUGHING STOCK INTO ROLLING STOCK: CAN RAIL PASSENGER INFORMATION HELP MAKE A DIFFERENCE?

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Abstract

Statistics that seemingly reflect the poor performance of the passenger rail industry have caught the attention of the media. Passenger complaints are up to record levels. Train Operating Companies are under pressure from watchdogs to improve reliability and punctuality. Railtrack is faced with £40 million in fines from Government for failing to improve network performance (ORR, 1999). There are grand schemes in place to improve the image of the railway. New track and carriages, tilting trains, passenger charters and ever more investment are being promised to deliver a passenger rail industry that can do justice to the principles of privatisation. Passenger information is an important aspect of these improvements. The demand for pre-trip information demonstrated by the huge number of requests to passenger information telephone enquiry lines and web sites reflects its importance. However, far less consideration has been given to understanding the role that information might play in assisting passengers who have already planned their journey but who encounter problems when they travel by train.

Journey breakdowns (failures to execute a journey as planned) can be severely disruptive to rail passengers in terms of lost time, anxiety and frustration. This paper defines a set of journey breakdown situations that can be encountered by rail passengers. For each situation, options to recover the journey are considered. Journey recovery is defined as the attempt to continue with a journey that has experienced a setback. The paper presents the analysis of complaint letters received by the Association of Train Operating Companies in one year. Such letters typically contain detailed accounts from passengers of journey breakdowns and attempts to recover the situations and make use of available information. The opportunities for traveller information provision to assist in journey recovery are discussed. Accessible, timely and appropriate information provision en-route has the potential to alleviate problems faced by passengers. This can improve passenger satisfaction with completion of their immediate journey and might also be decisive in ensuring they have the confidence to use the rail network again in future.

INTRODUCTION

Despite the technological advances made between Stephenson's Rocket (Oct 1829) and the modern GNER InterCity 225, such advances are not reflected in current journey times and punctuality. For example, the current railway timetable allows 44 min for the Portsmouth to Southampton train that in 1898 took just 35 min (Leake and Macaskill, 1998). This is not merely because there are now more stations, although it may be due to higher frequencies. The Wickford-Southminster train now takes a minute more than it did in 1974 to cover the same journey with the same number of stops. Leake (1998) notes that while British railway companies complain about decades of under-investment as the reason for their lack of punctuality, Indian trains (see Figure 1) report 95% punctuality.

Figure 1. Rail travel in India (from the Sunday Times)

According to the Office of Passenger Rail Franchising (OPRAF, 1998) 8 out of 25 Train Operating Companies achieve 90% punctuality and 99% reliability. The rest do not. (Punctuality means within 10 min of stated arrival time for ex-InterCity routes, 5 min for local routes. Reliability means trains running across 50% of the route mileage.) In the year from 1st April 1997- 31st March 1998 the passenger train operators registered 960,000 complaints from passengers (649,615 written) representing 115 complaints per 100,000 passenger journeys (ORR, 1999a). In the year 1998-99 there were over 1,000,000 complaints (737,331 written). This represents 122 complaints per 100,000 journeys (ORR, 1999b). Of these complaints, 55% concerned train service performance. The Rail Regulator's view is that these figures do not fully reflect passenger dissatisfaction, but that they depict a rail industry that is increasingly failing the customer. A lack of investment in rail infrastructure has led to increased delays and unreliability (DETR, 1998). Yet there may be many other reasons why complaints are rising. The rail regulator has encouraged complaint collection. Press coverage of complaints has brought complaining to peoples' attention. The individual train operators and government bodies have introduced complaints procedures. There are compensatory payments to complainers. To encourage more people to use the rail network, rail companies will

need to overcome the perception of rail travel as something about which to complain. Passenger information represents a key means by which the extent of adverse reaction to rail travel might be redressed. The nature of public transport information and the role it can perform is summarised in Table 1.

Promotional role	
Mobility	Propose destinations and/or reasons for travelling
Presence	Tell people about public transport: include public transport in the range of options open to people
Image	Improve the image of public transport, highlight its advantages
Teaching role	
Learning	Facilitate understanding of how to use public transport (Tickets, fares, etc.)
Conforming	Familiarise patrons with the rules of conduct for a collective system
Operational role	
Trip planning	Facilitate the preparation and planning of journeys on public transport (Schedules etc.)
Access	Facilitate access to the network (Reductions)
Travel	Facilitate the journey itself (indications, identification, guidance)
Arrival	Facilitate the onward journey after arrival
Modification	Inform users of and explain reasons for modifications with respect to scheduled service
Appropriation role	
Atmosphere	Participate in creating the physical and psychological atmosphere of the journey
Control	Give the patron more control over his journey and the various options available to him

Table 1. Information functions (from Le Squeren, 1991)

Anderson (1993) identified six objectives for a rail information system (stemming from similar objectives relating to the London Underground). These are:

1. to assist passengers in planning and during their journeys;
2. to improve passengers' efficiency of movement through the system (leading to a reduction in travel time, or their perception of it);
3. to provide reassurance and confidence to passengers (indicating that staff know what is happening and are in control);
4. to advise passengers if changes in their route become necessary;
5. to enhance the quality and range of services offered (with the aim of attracting more passengers); and
6. to provide staff with a better picture of what is happening (to enable them to effectively respond to enquiries from passengers).

Passenger information can improve understanding of what the passenger rail industry has to offer, enable journey planning and provide travel itineraries that assist journey execution. It does not materially improve rail services. It cannot increase punctuality or frequency or reduce service journey times or costs. However, it can empower the passenger to make confident and effective use of what is available. Passengers value information. The telephone-based National Rail Enquiry Service (NRES) received

some 60 million requests in 1999, compared to 37 million in 1997 and 52 million in 1998. The Railtrack Web site that provides information access to National Rail Timetable information processed a similar number of journey planning enquiries. Some recent research undertaken by ATOC demonstrates that NRES is revenue generative and makes a valuable contribution to railway finances.

Availability of information is increasing and in turn passenger propensity to seek information and their expectation to find it available are both also increasing.

Access to telephone and web-based information systems predominantly concerns pre-trip journey planning. Yet information has considerable potential to assist passengers during their journey. The complaints statistics given at the start of this paper suggest that at least one million rail passengers a year suffer some disruption to their journey. In some cases existing provision of information may have served to alleviate frustrations and instruct passengers on any changes necessary to complete their journey. However in many cases passengers have suffered unnecessary delay, inconvenience and irritation because of an absence of information to enable them to address the disruptions to their journey.

This paper offers an initial consideration of the merits of information provision in situations where a passenger's journey has "broken down" and where access to suitable information could assist in "recovery" of the journey. Complaint letters provide a useful insight into journey breakdowns encountered by passengers and typically include a detailed account of the passenger's experience and attempts to recover the journey including their use of information. Complaint letters received by the Association of Train Operating Companies (ATOC) are examined and a classification of journey breakdown situations is developed.

A BRIEF OVERVIEW OF THE PASSENGER RAIL INDUSTRY

The railway system in the UK was developed in the 19th century by a plethora of independent railway companies, with their own lines and procedures. Many of these were not commercially viable and by 1921 nearly all of them had amalgamated into four companies. In 1948 these companies were nationalised as the Railway Executive, part of the British Transport Commission. This was replaced by the British Railways Board in 1962. It included passenger and freight trains, stations, hotels, some ferry services (to Holland, Belgium, France, Ireland, the Isle of Wight and the Channel Islands) and 31932 km of track (van Uden 1998). The railway part of this enterprise was known as British Rail (BR). BR received grants from Central Government to cover programmes that were not self-supporting and for routes running at a loss. In 1987 the grants totalled £786 million (British Council 1997), with no sign of any future reduction in this level of subsidy.

By 1992 the government was convinced that BR could be run more efficiently within the private sector. The Railways Act was passed in November 1993, dividing BR into its component parts according to three main functions:

1. Railtrack – an organisation with ownership of, and responsibility to maintain and develop the railway infrastructure including tracks, stations, signalling, tunnels and bridges.

2. Train Operating Companies (TOCs) – organisations responsible for operating passenger services and most stations associated with those services

3. Rolling Stock Companies (ROSCOs) – organisations providing/leasing passenger rolling stock to the TOCs.

The franchisees that took over the privatised rail industry are subsidised by Central Government. In 1996/97 the subsidy for the first 13 TOC franchises was £575.9 million. This figure is set to reduce, possibly to £117.5 million (White, 1997).

The UK rail network is now run by 25 Train Operating Companies (TOCs) post privatisation. They have made commitments as part of their franchise agreements to improve reliability, efficiency, security, to refurbish rolling stock, renovate stations, to launch new services and to invest in information systems. Their umbrella association, ATOC, was set up in April 1994 to support these companies and become the trade association of the passenger rail industry. Its main role is to (ATOC, 1998):

- run joint activities for these companies;
- represent them; and
- co-ordinate activities when members want to act together.

To offer passengers the widest possible choice of benefits, there are certain arrangements the train companies must carry out. ATOC helps them to:

- make sure passengers can buy tickets for any network in the country;
- set fares (by holding the contracts between TOCs and the database manager SEMA), sell tickets and share out the money from these;
- market the Railcard products;
- organise staff travel;
- manage the National rail (phone) Enquiries service.

Operation of the privatised rail industry is overseen by the Office of the Rail Regulator whose duties include (ORR, 1998):

- the issue, modification and enforcement of licences to operate trains, networks, stations and light maintenance depots;
- the enforcement of domestic competition law in connection with the provision of railway services;
- the approval of agreements for access by operators of railway assets to track, stations and light maintenance depots; and
- consumer protection and promotion of passengers' interests.

More recently the Government also proposed the establishment of a Strategic Rail Authority to "provide a focus for strategic planning of the passenger and freight railways with appropriate powers to influence the behaviour of key industry players" (DETR, 1998). Prior to the necessary legislation being passed for such a body, a shadow Strategic Rail Authority has been established. One of the key roles of the authority will be to promote the use of the railway within an integrated transport system.

The Governments Transport White Paper (DETR, 1998) outlines its vision for improved public transport which includes:

- more and better buses and trains, with staff trained in customer care;
- a stronger voice for the passenger;
- better interchanges and better connections;
- enhanced networks with simplified fares and better marketing, including more through-ticketing and travelcards; and
- better information, before and when travelling; including a national public transport information system by 2000.

The White Paper notes that the TOCs and Railtrack are now working together to improve information in terms of:

- common standards for information displays and timetable information;
- development of real-time information for passengers; and
- co-operation between operators following service disruption.

PASSENGER INFORMATION SYSTEMS

Under BR, local stations responded to local train enquiries. Post privatisation, stations do not pass on journey information by telephone. NRES is provided on behalf of the TOCs by ATOC and is accessible from a single national telephone number (0345 48 49 50, soon to be 08457 48 49 50). Enquirers can telephone for train times and fares from this number, 24 hours a day, 7 days a week (ATOC, 1999). This service uses the Great Britain National Railway Timetable as its basis for timetable information. This is stored in electronic form in such a way that schedule information can be provided in response to enquiries. In the event that changes to the Timetable occur, and with enough advance warning, these can be sent to NRES and the Timetable can be amended. The T-12 campaign endeavours to ensure that notification of any Timetable changes are given to NRES at least 12 weeks in advance of implementation. This provides sufficient notice to incorporate scheduled engineering works and holiday timetables into the NRES database. Amendments can still be made at 36 hours notice, any less than this and they cannot be incorporated into the Timetable. In the aftermath of a genuine emergency each of the 6 call centres that currently operate NRES are contacted. Call centre operators are then expected to take account of this information where it affects routes relating to passenger enquiries. Currently NRES use the times that trains pass signalling positions to determine where they are on the track and in relation to the timetable. NRES use separate systems for fares and timetables. A new Rail Journey Information System (RJIS) that combines information on fares, timetables and reservations is currently working in pre-production mode. Real time train running information will be an additional facility introduced in late 2000. It is expected to be able to handle five million queries a month - at least 70 queries a minute (Computing, 1998). This system will be able to identify when a train has been delayed, and can then pass this information on to passengers, along with advice about alternative routes.

Over 94% of homes in the UK have a telephone (ONS, 1999) and hence have access to NRES for pre-trip information. One in ten households in Great Britain now have access to the Internet (Roper Starch Worldwide, 1999) and access is set to increase dramatically in the home, in the workplace and via mobile communications. The rail

industry is responding to this trend and there are Web sites that offer information comparable to that from NRES.

The Railtrack Web site (http://www.railtrack.co.uk) was established at a similar time to NRES as a response to Railtrack's obligation to make the Great Britain National Railway Timetable available to the public. The site offers a journey planning facility (see Figure 2). Subsequent to a user submitting an enquiry, the system returns three possible journey plans based around the time of day stipulated (see Figures 3 and 4). Despite not providing fares information, there has been a dramatic increase in use of the site since its launch and it now processes in excess of one million journey planning enquiries each week (Lyons, 1999).

Figure 2. Railtrack Travel Information submit form page

Figure 3. Railtrack Travel Information results page

Figure 4. Railtrack Travel Information details page

More recently Virgin has established a Web site called TheTrainLine (http://www.thetrainline.co.uk/) that provides both journey planning and fares information with the option of on-line booking and payment (see Figure 5).

Figure 5. TheTrainLine results page

8

Access via telephone or Internet to information for pre-trip journey planning is generally very good. From the 60 million calls made to NRES in 1999, the level of NRES-related complaints is 0.03%. Information is also available at stations via station staff, timetable boards and terminals, kiosks (e.g. Figure 6) and Help Points (see Figure 7). Much of this information is historical rather than contemporary or predictive. Some kiosks have modem links, but others require manual updates.

Figure 6. TRIPlanner Kiosk

Figure 7. Railtrack Help Point

People in a recovery situation need accurate information. It is better to omit some information than to present false information, and to be clear rather than all encompassing. Users should be able to find the information they need quickly, and recognise it when they do find it. However, once a journey has broken down, some of the more obscure timetable variations may become necessary. If a passenger arrives at a station to discover that their train has been cancelled or delayed, they have a number of choices:

1. Cancel the whole trip;
2. Wait for the next train; or
3. Try an alternative mode.

The sort of information the passenger is looking for will depend on the type of journey being undertaken. If the reason for the trip is a time dependent event, the passenger may know that the next train will not get there on time and so the journey becomes redundant. If the passenger has allowed sufficient float time, or the trip is more of an excursion, then the passenger can use a variety of information sources to learn how to proceed. The availability of appropriate, accessible and timely information has the potential to enhance the number of recovery options. The more information there is, the greater the number of options that are available to the passenger.

Until such a time that all trains run precisely to schedule there will be a need for collection and dissemination of real-time information. The rail industry is investigating ways to exploit information and communications technology to gather

and distribute such information. For example ScotRail have tested a Global Positioning System (GPS) to try and pinpoint trains and provide customers with more accurate information (Campbell, 1998). This has led to a countdown and map display to provide passengers with arrival times within 25 seconds of accuracy. As well as knowing where the trains are, NRES hope to know where they ought to be. Signal boxes record when trains pass, they can also record when scheduled trains have not passed.

There is a need to understand how rail information systems might be further developed and used in supporting passengers en-route whose journeys have suffered a set-back and who must re-plan the remainder of their journey. Re-planning of a journey might include the (partial) use of another mode. The National Public Transport Information System currently being developed expects to cover other public transport modes to rail, but may not do so in a way that is appropriate for untimetabled journey recovery situations. Such a system does not cater for taxis and hire cars which may present viable alternatives to recovering a rail journey by continuing on the rail network. To understand the information potential needs for journey recovery it is first necessary to identify the types of journey breakdown that can occur.

JOURNEY BREAKDOWNS

A journey breakdown can be defined as a failure to execute a journey as planned. In some cases a breakdown will be the fault of the traveller either directly, or indirectly as a consequence of problems associated with the means of transport used to reach the station. In other cases it will be the actual or perceived fault of the rail industry in terms of information provided or its interpretation or through a lack of information to enable the traveller to completed the journey as planned. In other situations a journey breakdown will be a direct result of a failing of the train service in terms of not operating according to the timetable. Consideration of ways in which a journey might suffer a setback leads to a set of journey breakdown scenarios as shown in Table 2. An interpretation of the likely consequences or recovery options for each scenario is also given.

To demonstrate the potential importance to the passenger rail industry of tailoring their information systems to support passengers needing to establish recovery options following a journey breakdown, the following steps would need to be taken:

1. Determine the frequency of occurrence nationally of each breakdown scenario over a given time period.
2. For each scenario establish an estimate of the average "level" of recovery that is possible, given perfect information, in terms of delay saving and monetary cost. Other measures constituting generalised travel cost might also be considered.
3. Establish the propensity of passengers, given the availability of the necessary information, to pursue the recovery options identified.
4. Estimate the collective value to passengers, over the given time period, of providing information that enables journey recovery options to be determined.

Such an approach is difficult to pursue. Categorising the complaints received annually by the industry according to the scenarios could enable step 1 to be completed. However the industry does not currently record all complaints in a form to enable this to be done. Further, not all passengers who suffer a journey breakdown will register a complaint. Nevertheless, analysis of written complaints does provide a useful preamble to the four-step approach or similar in terms of acquiring a better understanding of the breakdown situations people face and the consequences that ensue. ATOC gave permission for its complaints files to be examined.

No.	Scenario	Consequences	Recovery Options
1	NO PROBLEM	Journey completed as planned.	No recovery necessary
2	GET TO STATION, CAN'T FIND TRAIN	Will miss train if can't find it.	Signs, staff and other passengers can give direction.
3	AT STATION, TRAIN IS DIFFERENT FROM THAT EXPECTED	Time cost if passenger must wait for another train	Need to find if train is suitable, or change mode.
4	AT STATION, FIND PRICE IS DIFFERENT FROM (RECOLLECTED) QUOTE	May miss train if insufficient funds. Possible anger and mistrust.	Can still use train, if able to pay new price, or try alternatives
5	GET TO STATION, IMMINENT DEPARTURE	Miss train or try to pay on board. Possible penalty.	If catch train, no problem. If not, need information to proceed.
6	GET TO STATION LATE, TRAIN HAS GONE	Miss train, possibly cancel trip.	Catch up with the train, take a later one, change mode or cancel trip.
7	BOARD WRONG TRAIN	Time cost	Return to origin, try to meet train or take an alternative route.
8	GET TO TRAIN, TRAIN DOESN'T DEPART	Delay, possible cancellation	Find out what is happening, change train, mode or cancel trip.
9	TRAIN ARRIVES LATE	May give up.	Find out if train will arrive, or another option must be taken.
10	TRAIN CANCELLED	May give up.	Find alternatives or cancel trip.
11	TRAIN DEPARTS LATE	May miss connections.	Find out if the delay is sufficient to change plans.
12	TRAIN STOPS OUTSIDE STATION	Passengers must wait.	Begin to plan for when the train starts moving.
13	TRAIN STOPS AT INTERMEDIATE STATION	Delay while waiting for action.	Need information to decide to stay with train, take alternatives or cancel trip.
14	TRAIN DOESN'T STOP AT EXPECTED STATION	Delay, anxiety.	Get off at next suitable stop for return by appropriate mode.
15	TRAIN RUNS BEHIND SCHEDULE	Late to destination, may miss connections.	Remain with train or depart early to try alternatives.
16	TRAIN RUNS AHEAD OF SCHEDULE	Arrive early. Possible wait for collection or connection.	Phone ahead to inform of early arrival, catch other connections.
17	PASSENGER USES NETWORK SUB-OPTIMALLY	Time and financial costs.	Use information to become superior traveller.

Table 2. Recovery Scenarios

COMPLAINTS

Complaint letters held by ATOC

At present, the vast majority of the written complaints about the rail service (737,000 in 1998-99) are sent to the TOC concerned. The minority, which may have been sent anywhere else, will normally be forwarded to ATOC, which then decides where they should be processed. Complaints received by ATOC about a TOC or NRES follow a set procedure. The operations manager sends a standard response to the complainer

apologising for the difficulty, thanking them for providing feedback and indicating who is going to deal with the complaint. A copy of the complaint is sent to the appropriate department along with a request to give it prompt attention and copy a response to ATOC. This response will again apologise for the problem, indicate whether or not the department feels it was their fault, provide any suitable information or solutions to the customer and deliver any remuneration. ATOC will consider if it should also compensate the customer. The particular complaint may be used for staff training or to help find bugs in the enquiry system. It is then filed for a minimum two-year period.

The complaints passed on to ATOC were examined at their London offices. These are kept in active (for the current year) and stored (for previous years) files. By the middle of February 1999 the active and stored files contained 105 letters of complaint. These covered the period from the beginning of January 1998 to the end of January 1999 (the TOCs received a million written and oral complaints in this time period, ORR 1999b).

Inevitably the complaint letters were not written to a common format with their subsequent analysis in mind. However there was a substantial degree of overlap in terms of the information they contained and a "data-entry" form was devised to elicit information from the set of letters as shown in Figure 8.

Scenario representation

The letters of complaint represent an extremely biased sample of journey breakdowns experienced. They address situations that are the fault of the rail service. They do not include situations that are the fault of the traveller, such as arriving late at the departure station and missing the train.

Table 3 shows the representation of the 17 scenarios from Table 2 amongst the 105 complaints. (N.B. While it may seem odd for people with no problem to complain, some felt that information was inadequate despite not experiencing any difficulty.)

Scenario	No. of Complaints	Scenario	No. of Complaints
1. No problem	3	10. Train cancelled	22
2. Get to station, can't find train	3	11. Train departs late	5
3. At station, train is different from that expected	14	12. Train stops outside station	1
4. At station, find price is different from quote	23	13. Train stops at intermediate station	9
5. Get to station, imminent departure	2	14. Train doesn't stop at expected station	2
6. Get to station late, train has gone	2	15. Train runs behind schedule	16
7. Board wrong train	1	16. Train runs ahead of schedule	0
8. Get to train, train doesn't depart	0	17. Passenger uses network sub-optimally	1
9. Train arrives late	2		

Table 3. Scenario Representation

Figure 8. Complaints Data-Entry Proforma

It became clear on reading the complaint letters that many of the scenarios were inter-related. A train that arrives late (9) will probably also depart late (11). If passengers "give up" on this train, it becomes a train that doesn't depart (8). Trains with imminent departure (5), or where passengers can't find the train (2), may become trains that have gone (6). Trains that make unanticipated stops at stations (13), or on the line (12), will run behind schedule (15). Many passengers had to take a different train from that expected (3) because their train had been cancelled (10). Based on such considerations, the 17 scenarios can be translated into 5 journey breakdown bundles in terms of the recovery options that will need to be considered. These are summarised in Table 4.

Bundle name	Description	Scenarios	No. of Complaints
No train	In fact, or in effect, there is no train. If the train is cancelled, doesn't depart or has already gone, the prospective passenger must plan to do without this train.	2, 5, 6, 8, 10	29
Late train	Those trains that will not get to the destination on time, stopping en-route or running behind schedule. Passengers need to know how they will be affected by falling behind the timetable.	9, 11, 12, 13, 15, 17	34
Unexpected train	These are more expensive than anticipated, or on a different schedule. Passengers must find out if it is still worthwhile boarding.	3, 4, 7, 14	40
Incomplete journey	The train will not get to the desired destination. Passengers, or the train, miss the stop, if the train even goes there. Such passengers have to find out how to get to the destination from a new starting point.	7, 10, 12, 13, 14	34
No problem	Includes the people who can't find their train, or who have imminent departure, as long as they make it on board. Also includes trips ahead of schedule. This group does not need recovery information.	1, 2, 5, 16	8

Table 4. Bundle Definition

Journey recovery options

The first bundle covers those cases where the passenger does not board the planned train at the origin. Pre-trip information, particularly station information, is available to these passengers. Several trips mentioned in the complaints to ATOC would have experienced no problem if the passenger had allowed more float time at the outset to catch an appropriate train. One passenger complained about missing the Barnham – Bognor train and being late for an interview. This train takes six minutes and runs every ten. ATOC did not pay compensation in this case. In a further 14 cases the journeys might not have needed to be recovered if people had been given the correct information to begin with: morning times were given instead of evening ones; and summer schedules began, but passengers were not told about them. A passenger arrived at Blackburn station in time for the 08:45 to Preston she had been told about by NRES, only to find "eventually – there was no one about" that there was no 08:45 to Preston on a Sunday. The passenger took a taxi instead. Another passenger, who was advised to take the 15:55 Banbury – London to connect with the Edinburgh train, noticed it was not on the departure board. Ticket staff then told him a special timetable was in operation during long running engineering works. He was advised to take another train that only allowed 2 minutes for a connection, which it missed. He then missed the last train to Edinburgh and had to stay in London overnight. This passenger had used NRES, departure notices and staff, but was still unable to

complete the journey as planned. He could have waited until the next day to make the trip, at less cost. A fourth passenger tried several times to get information about a train from Birmingham to Totnes on a weekend after he had heard about service disruptions. Every call received different information and eventually he was told there was a coach. He elected to "forgo the delights of the rail system for the enormous convenience and considerably reduced cost of [his] private car."

The second bundle "late train" covers situations where the passenger boards a train that will not reach the destination by the expected time. Here the passenger is limited to en-route information to discover how to proceed. Unless the passenger has time at a connecting station, information sources are limited to fellow passengers, conductors, telephone and Internet. One lady, taking her son from Durham to Amsterdam via Liverpool airport, was told by NRES that the 14:42, change at York, would get to Lime Street at 18:01 where there were trains every 15 minutes, taking 10 – 12 minutes for this leg. Unfortunately, the Durham train was delayed by a broken down freight train, so the passenger was late into York and missed her connection. Staff there told her about another train she could have caught, but had also now missed. The next would get her to Liverpool for 19:00 so York staff got her "technically checked-in" at the airport to save time. Lime Street staff had arranged a taxi instead of the final train, as they knew there was no train to the airport from Lime Street. The taxi driver said it would take too long to get to the airport so the passenger changed her flight and checked into a hotel. The passenger's complaint was not that the train was late, but that as there was no train from Lime Street to the airport, she should have been told to take an earlier train and allow more time to get to the airport. She used staff at various points to get information having "lost faith in 48 49 50". This passenger was refunded £158. One man whose train was "travelling at snail speed" towards London because of a crane on the line, disembarked the moment he was near enough to the Underground. This was a man who knew London well enough to change mode. Most people do not know there are other routes or modes they could use. Out of 62 complaints with sufficient journey descriptions, around 28 could have been completed with delay savings if the passenger had taken an alternative mode, or caught another train.

The third bundle covers situations where there is a train ready for departure, but it is different from the one the passenger expects. It may have a different price or schedule, or the passenger may board the wrong train. The passenger must decide whether or not to continue with the journey. One embarrassed teacher had to use his own money to pay for a school trip, having been misquoted on the fare. A passenger who suspected his discounted ticket was not available on a certain train was told boarding the wrong train could not happen as he "would not have been sold the ticket!" Two girls going on holiday had been quoted £19.50 for their tickets over the phone, but were charge £57 at the station. They had to decide to continue with less spending money on the holiday, or cancel it. They were refunded, but the holiday was spoiled. Another passenger whose fare was increased says that ticket staff were "rude, ignorant and quite beyond reasonable standards of conduct". Staff respond that they are "sick and tired of complaints about wrong information given to customers". NRES have now supplied all stations with NRES Complaint Forms to try and differentiate between genuine complaints and cases where NRES is unjustly blamed.

The fourth bundle is for incomplete journeys, where the passengers cannot get where they were expecting without adding legs to the trip. Some situations will be the same as for "late train" or "unexpected train", but there are some additions. Passengers have boarded trains that have then failed to get to the destination. One passenger specifically asked for a Waterloo – Trowbridge train that stopped at Warminster, as he wanted to drop off an envelope. The 18:17 did not stop. Another passenger travelling to Reading watched as the train sped by the station. He had to get off at the next stop and take a train back. A Member of Parliament travelling from Market Harborough to Essex was not happy when a coach was laid on. He commented that if he had wanted a bus he would have gone to the bus stop.

The fifth bundle covers journeys that are problem-free once the passenger boards the train. No one complained that their train arrived ahead of schedule, although one passenger did ask, if *he* could find a quicker route than NRES proposed, why didn't NRES inform people about this route? The answer was that NRES have to allow certain lengths of time for connections, even though some passengers are able to cross platforms quicker, or catch different trains if theirs gets in early.

Letters assessed within each bundle highlight, in some cases, the complexity of recovery options that people must endure. They reveal an ability of some passengers to be effective in journey recovery, while others flounder with the added frustration of conflicting information. People do make use of available information sources, but their complaints clearly indicate a need for improvement in clarity, timeliness and reliability.

Existing information provision

As mentioned, there is good access to pre-trip information. Prior to boarding a train, passengers can phone NRES, use the Internet, information kiosks, paper timetables, ask friends, station staff or even people standing on the platform how to get from A to B. Once on board the train, access is more restricted. None of the fellow passengers can help with unexpected situations, although some journeys do seem to have regular idiosyncrasies. Regular passengers over the Welwyn viaduct know there is a delay if the East Coast express has not passed through, infrequent travellers might not know this. There are no information kiosks on board trains. On board the train the primary source of information is the conductor, who can give out some information about how the train is expected to continue, but not about how to complete any particular journey. Passengers can still phone NRES. Some 20 million people now have mobile phones in the UK, with 15% of these able to connect to the World Wide Web, and so able to access Internet timetable services en-route. However, if there is a problem with the information NRES supplied then passengers will not trust any new information, which may be out of date depending on the nature of the problem. Of the 105 complaints assessed, 7 concerned engineering works, 11 were for delayed trains, natural phenomenon covered 3, and 8 did not say. From the complaints collected, 33 people tried to verify the information they were given. There were a number of trips where NRES did not give correct information, because of a confusion over travel time (n=9), schedule confusion - changed with insufficient warning or incorrect information in NRES database (n=16), or because there was an incident where NRES was not informed (n=25). Railtrack are keen for people to use the Internet to obtain information. None of the complaints referred to Internet use, possibly because no one used it to get information, because they complained directly

to Railtrack, because expectations of the Internet are so low that people do not bother complaining, or possibly because the information was accurate. Railtrack surveyed Web site users for information they would like to see in addition to timetables (see Figure 9). Maps and fares came out top, both with over 4000 requests (Railtrack, 1999). More than 2500 requests were for information on engineering works, i.e. when the network was not expected to run normally, and which prompted 11% of the complaints to ATOC about actual journeys made.
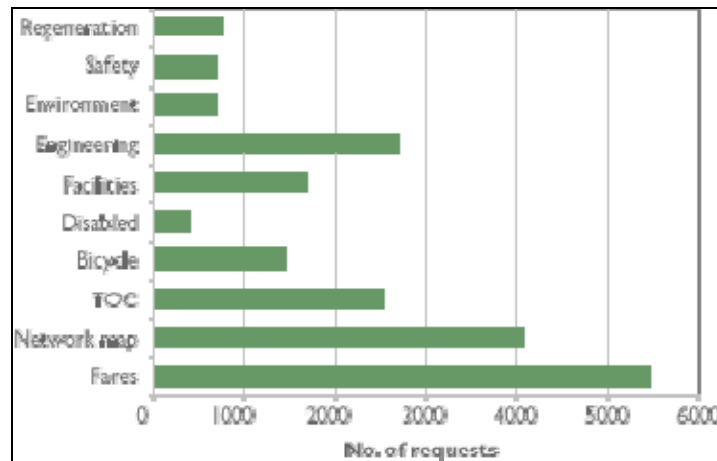

Figure 9. Railtrack Other Requests

Compensation

The complaints analysis shows that a quarter of all complaints that ATOC received could have been avoided with more accurate information. ATOC paid out £1313 in compensation from these 105 complaints. Scaled up nation-wide with total complaints received this would be around £13,000,000 per year that could be saved by the passenger rail industry.

From complaints received between April 1st to October 17th 1998, the passenger train operators reported 356,476 written complaints to the rail regulator (ORR 1999c). The report does not say how much compensation was paid out. In this time period ATOC paid out £897 on 57 complaints. If this were scaled up nationally, the total could exceed £5.6 million in refunds.

The customer is not always right. One passenger preferred to miss an event and claim £120 refund rather than find another way to travel 15 miles. Another tried to claim £1000 because the late train meant he missed the first half of England's match against Argentina in the 1998 World Cup, on television. The railway industry has blamed its problems on everything from under-investment to the wrong sort of leaves on the line. If passenger rail is going to move from a perceived mockery to a reliable service, perhaps passenger information can make a difference.

CONCLUDING REMARKS

This paper has sought to illustrate the current and potential future role of passenger information in supporting a rail industry that is still beleaguered by problems of train cancellations and punctuality. For long distance journeys in the UK the train has great potential as an alternative to the car. Yet in terms of passenger kilometres

travelled per year, car travel has increased dramatically over the last 40 years while the level of rail travel has remained largely unchanged (see Figure 10). The Government recognises the importance of information in improving the awareness and attractiveness of public transport modes and in making journeys feel more seamless or easy to execute. The passenger rail industry is evolving very good information systems for timetabled services and is beginning to address the need to take account of planned and unplanned deviations from the timetable. However, it appears that the specific value of information to passengers in journey breakdown situations is not being fully addressed. This paper has highlighted and conducted a preliminary examination of rail journey breakdown and recovery. The collective value of information to assist passengers in such situations has not yet been established. However, from the initial investigations of passenger complaints there appears to be substantial potential for (improved) journey recovery information to improve both the plight of stranded passengers individually and the image of the passenger rail industry as a whole with the prospect of attracting higher levels of patronage.
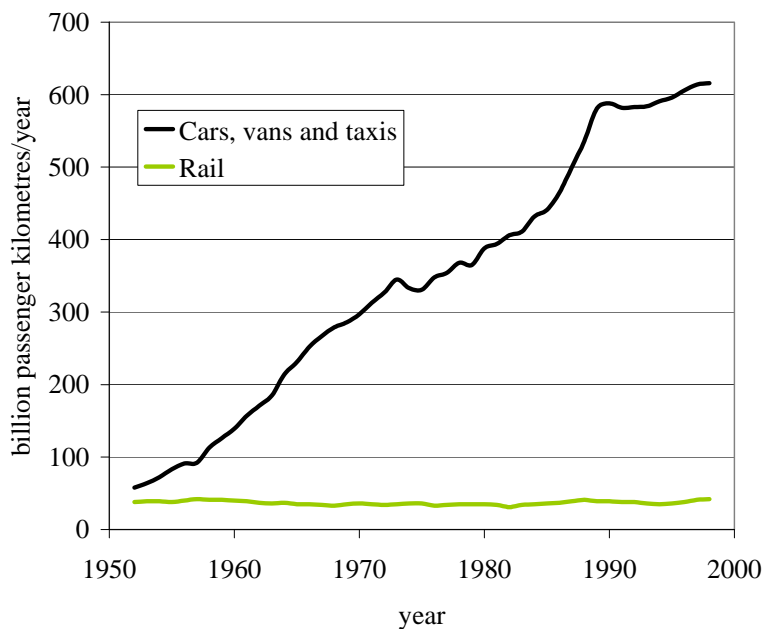

Figure 10. Billion passenger kilometres/year travelled by mode: 1952 - 1998 (source: Transport Statistics Great Britain, 1999)

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