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Response to ORR Retail Market Review

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Introduction

BR Fares Ltd. operates the website www.brfares.com, which provides fares information for the British rail network. Revenue is derived from adverts on the site. The business model is by no means lucrative but provides a small income, which suggests that the site fulfils a useful role in providing full details of all available fares, time restrictions etc., that retail sites (neither TOC nor 3rd party) do not.

In the process of developing the site over the past four years I've become very familiar with the fares database and various related data feeds, which I feel qualifies me to offer comment on these aspects of the consultation. Therefore my responses will be primarily limited to the questions that touch on these areas.

Responses to Questions

QUESTION 7. SPLIT TICKETING

I have developed a split ticketing "engine". This is a computer program that

- takes as input an itinerary for one or more journey opportunities on the national rail network,
- analyses all possible fares for all combinations of calling point stations, applying restriction data to determine which fares are valid, and
- produces as output a list of the cheapest possible combination of split tickets that is valid for each journey opportunity.

My split ticketing engine is still under final development and not yet publicly available through any websites, but it works for both single and return journeys and gives accurate results in a very fast time.

I absolutely refute the suggestion in Case Study 1 that split ticketing calculations will cause undue burden on retailing systems, and submit that this would only be true for badly-designed systems. My engine performs all its calculations off-line using a static copy of the ATOC fares datafeed, and does not need to make any contact with industry retailing systems at all.

The only exception to this is when advance fare availability needs to be checked, since this requires making contact with a real-time database (the national reservations system) to check quota levels on individual trains. At this point I would note that in many cases walk-up split tickets (whose validity and restrictions can be calculated entirely off-line) undercut through advance fares and thus advance quota availability does not need to be checked. But when it does, I would suggest that with careful use of approximation and caching algorithms, the number of queries that need to be made can be kept to a very reasonable level and will not cause an undue burden.

I further submit that there are technical changes that could be made to the way the national reservations system combines real-time quota availability and static rules regarding barred trains, which would reduce the burden further.

Risks of Split Ticketing

I would note that it is in the interests of TOCs (due to the possibility of decreases in revenue) for passengers to feel that there are risks to split ticketing. Responsible parties should take care that public statements are correct, in order to avoid public perception of "Fear, Uncertainty and Doubt" (FUD - a common term in the computer industry) which inhibits take-up of new technologies.

There is evidence that even very senior staff at TOCs are not aware of the rules regarding split ticketing, e.g. Condition 19 in the National Rail Conditions of Carriage, which allows a single journey to be made using multiple tickets, and are contributing to the FUD surrounding split ticketing. For example, in an interview in the Guardian on 12th April 2012 CrossCountry's Head of Communications incorrectly stated that passengers would not be covered for delays when making a single rail journey using two separate advance single tickets.

I am concerned that the ORR is also contributing to this FUD, with the vague statement (also from Case Study 1) that "in the event of a delay to one of the legs of the journey, the passenger may not be entitled to continue on the subsequent legs". I believe this is incorrect, or at least should be backed up with a specific example. The document *Frequently Asked Questions about Advance fares*, issued by ATOC to member TOCs, even includes the explicit provision:

Where separate train companies are used for A-B and B-C with a change of train and ticket at B, it is still classed as a through rail journey in the event of delays provided connections were booked in accordance with the advertised minimum times for stations. For example, a passenger travelling Cambridge to Leeds holding a combination of Cambridge – Peterborough 'XC only' and Peterborough – Leeds 'EC only' is allowed to take the next East Coast service in the event of a delay on the CrossCountry journey causing the connection to be missed.

QUESTION 13. Fares not Saleable by Third Party Retailers

This is a minor point and simply augments the example of season tickets, which is used frequently in the consultation document. The other primary type of fare that is not saleable by third party retailers is an excess fare. In particular, a "change of route" excess should be issued when return tickets via different routes are available, and a passenger wishes to travel out via one route and back via the other.

The procedure for issuing such a ticket is to issue the cheaper return ticket plus an excess charged at half the difference between the two. Since such excesses can only be sold at station ticket offices, it puts third party retailers at a disadvantage as their only option may be sell the more expensive ticket or even worse, to sell two separate single tickets.

Some other types of tickets are saleable by third party retailers but may only be sent by post and not made available for "Ticket on Departure" collection. These include rover and ranger tickets (multi-journey tickets valid for unlimited travel in certain regions) and London Travelcard extension ("Boundary Zone") tickets. This puts internet retailers at a disadvantage compared to station ticket offices, which can sell such tickets.

QUESTION 14. Industry Processes - New Ticket Formats

Paragraph 5.31 discusses the new print format for credit-card sized (CCST) tickets. It is interesting to note that there is a competing "new format". As far as I understand, it was designed by the third party company Masabi and is currently issued by ticket offices and vending machines operated by the East Coast TOC. This competing format involves more minor variations to the existing design, but with the crucial addition of a cryptographically-signed Aztec code, which can be used to verify the legitimate issuance of a ticket.

The lack of wider roll-out of this format seems to me to be a missed opportunity to enhance the security and anti-forgery properties of CCST tickets. As printing technology becomes cheaper I can foresee a wider roll-out of CCST ticket printers, e.g. to large organisations for staff travel purposes, and a cryptographically-signed code on the ticket would be very helpful to ensure security and prevent fraud, which can only encourage innovative approaches to ticket issuing.

It is not clear why this format is not being rolled out further. The decision-making process for such things does not seem to be very transparent.

QUESTION 15. Access to and Quality of Industry Data

Access to Data

Since BR Fares Ltd. does not have the financial resources to subscribe to daily or weekly updates of data from ATOC, I make do with the thrice-yearly updates of fares data and weekly updates of timetable data from the ATOC open data website data.atoc.org.

The availability of such data in an open and free manner for download by anyone represents an indescribably huge improvement in openness and general attitude, compared to just a few years ago. ATOC deserve commendation for the steps they have taken to make the data available.

Unfortunately, not all the data needed to plan journeys and correctly determine ticket validity is yet available. The glaring omission is the electronic version of the National Routeing Guide. This describes the permitted routes over which inter-available through tickets may be used, and is vital for a complete split ticketing engine. At the minute ATOC only make outdated Routeing Guide data from late 2012 available for free, on a CD-ROM which must be requested by post.

The Routeing Guide should be included in the open data feeds immediately.

Data Quality

There are many issues with data quality, too numerous to list here, but I will provide a couple of indicative examples.

Break of Journey Permissions

"Break of Journey" includes starting and finishing short and refers to the ability to break a journey and resume it at a later time or date, or to make only part of the journey permitted by a ticket. Prior to Fares Simplification in 2008 break of journey was determined by the ticket type and could be determined from the fares data feed.

Since fares simplification, the rules on break of journey are more complicated and for certain ticket types the information is no longer available in machine-readable electronic format, but must be gleaned from human-readable restriction text. Obviously this can not be done automatically, but what's worse is that the human-readable restriction text is not even included in the data feed!

Knowledge of break of journey permissions is vital when determining the cheapest combination of fares for a multi-leg journey where a passenger may have an appointment at an intermediate station and then later needs to continue to a more distant station. It is unacceptable that the data feed does not include this information.

Data schema for Time Restrictions

The data schema used for time-based restrictions is not capable of representing the full range of restrictions. For example, restrictions of the form "Not valid on trains timed to arrive London Terminals before 10:00, regardless of where you board or alight the train" are relatively common yet can't be implemented in the data schema. Instead either each station that a passenger might possibly board or alight at must be listed individually, or a full list of banned trains must be provided (and kept updated every time the timetable changes!).

There are numerous examples of trains being erroneously shown as restricted in journey planners because they have been caught by restrictions specified in too coarse a manner, due to the limitations of the data schema. I can provide detailed examples on request.

In summary, the data schemas that describe ticket time restrictions in machine-readable format need a major overhaul.