



# Ticket Machine Usability Research 21 September 2010

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# Agenda

- Background
- Methodology and Sample
- Key Findings
- Disabled Passengers
- Recommendations

# Background

- Ticket queuing times research at major stations (May 2008)
- Buying a ticket at the station (October 2008)
- Ticket queuing times at large regional station (Aug 2010)

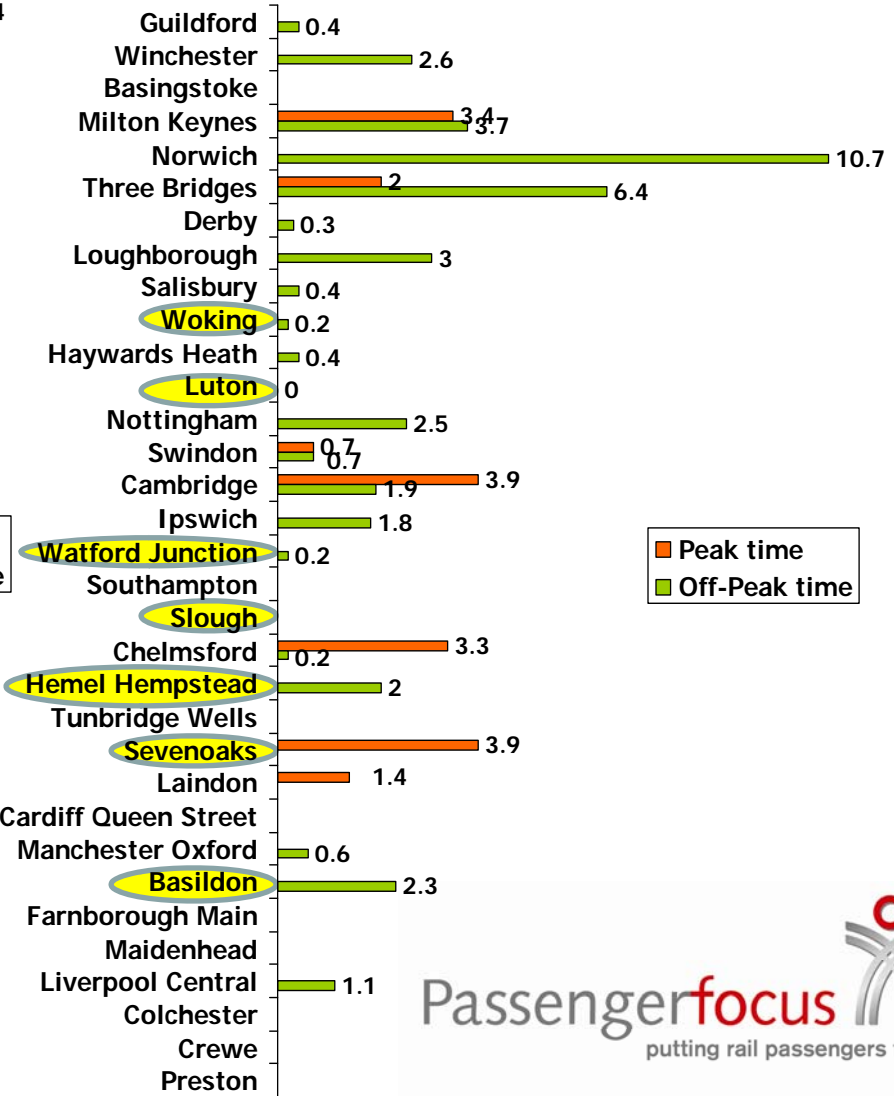
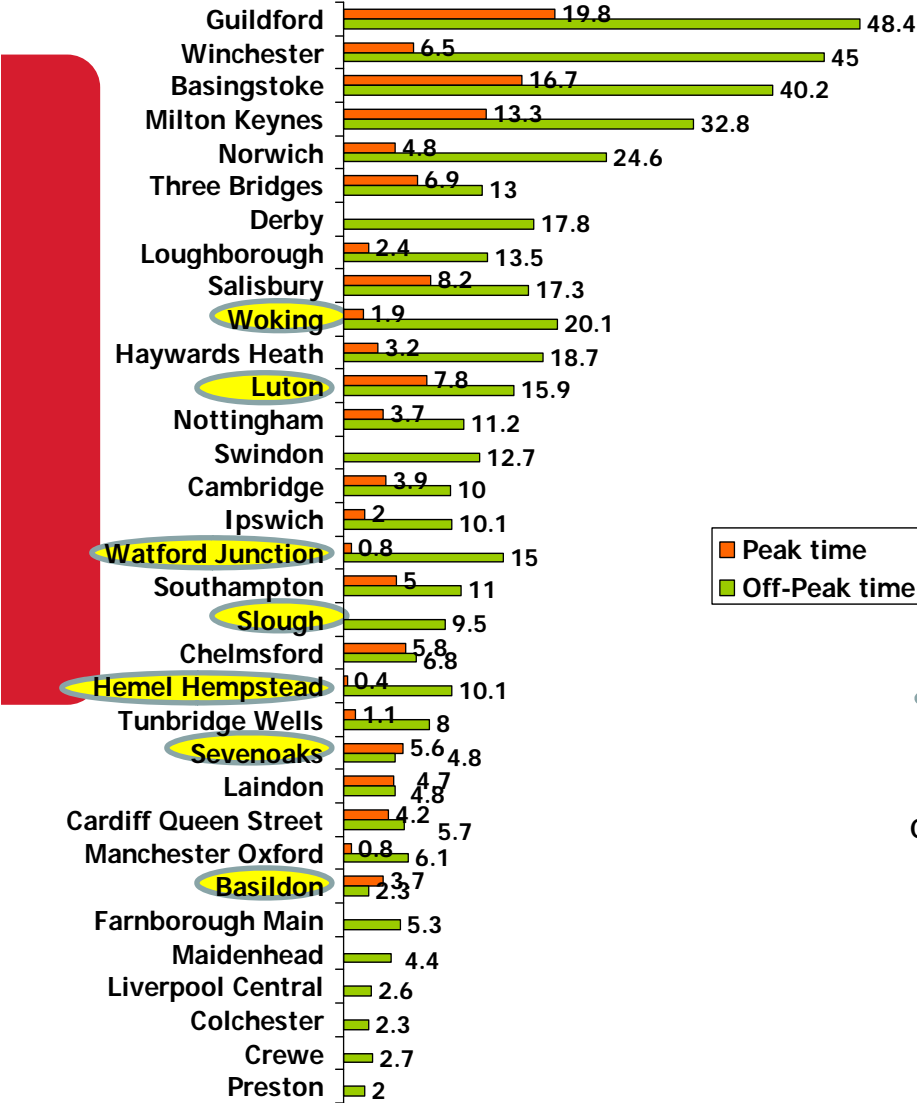
# Queue times exceeding TSA

- Queue times exceeded TSA mostly during off-peak at the weekend
- However, during an individual day there are clear 'spikes' which don't necessarily mirror peak/off peak ticket sales times
- The biggest peak is lunchtime; possible reasons may include more leisure travellers.
- But TVMs have rise and falls in usage to a much lesser degree

# Queue times (%) exceeding TSA – TO & TVM separately

## Ticket Offices

## Ticket Vending Machines



# Methodology & Sample

**Objective: To assess TVM usability from a passenger perspective and to provide guidelines for improvement**

**Fieldwork conducted in March and April 2010**

**60 Semi-Structured Interviews (45 minutes each):**

- 15 x (EMT, FGW, Southeastern and SWT)

**Sample included 6 interviews with respondents with disabilities:**

- 2 x vision impaired
- 2 x wheelchair users
- 2 x learning difficulties



Video – Tomorrow\_Op (5mins)

# Key Findings

- Majority unlikely to spontaneously consider TVMs as a natural alternative to buying ticket from staff:
- Most lack confidence to buy tickets from TVMs



# Front Screen

ANDOVER.

Railcard and child discounts can be applied later in the ticket selection process.



**SOUTH WEST TRAINS**

English Deutsch Français	London Terminals	Standard Anytime Day Single	£ 27.00	Basingstoke	Standard Anytime Day Single	£ 7.20
	London Terminals	Standard Anytime Day Return	£ 52.70	Basingstoke	Standard Anytime Day Return	£ 7.50
Monthly Season Ticket Renewal	Zone R1256 London	Anytime Day Travelcard	£ 57.10	One Day Car Park Station Car Park	Car Park	£ 5.00
Tickets for Tomorrow	Zone R1256 London	7 Day Travelcard	£ 107.20	Reading Stations	Standard Anytime Day Return	£ 12.80
Collect Pre-Paid Tickets	U1 London	Standard Anytime Day Return	£ 58.70	Salisbury	Standard Anytime Day Single	£ 6.70
	U1 London	First Anytime Day Return	£ 95.60	Salisbury	Standard Anytime Day Return	£ 7.00

12.04.10 08:37

More Popular Destinations    Any Destination    Travelcards and tickets to Underground Zones



# Contrast between **button and background** more important than contrast between **button and text within it**

08/04/2010 15:03 Bromley South **southeastern.**

Coins  
Notes  
Credit/Debit cards

Renew adult monthly season ticket  
Ticket(s) for tomorrow

Welcome, touch the screen to buy your ticket(s)

Oyster A-Z destination finder Travelcard(s) Collect prepaid ticket(s) (Ticket on Departure)

Quick ticket selection for popular destinations

London Terminals Standard Anytime Day Single	£ 4.40	St Mary Cray Standard Anytime Day Single	£ 2.10
London Terminals Standard Anytime Day Return	£ 7.90	Orpington Standard Anytime Day Single	£ 2.10
Travelcard Zones 123456 Off-Peak Day Travelcard	£ 7.50	Beckenham Junction Standard Anytime Day Single	£ 2.10

ers first

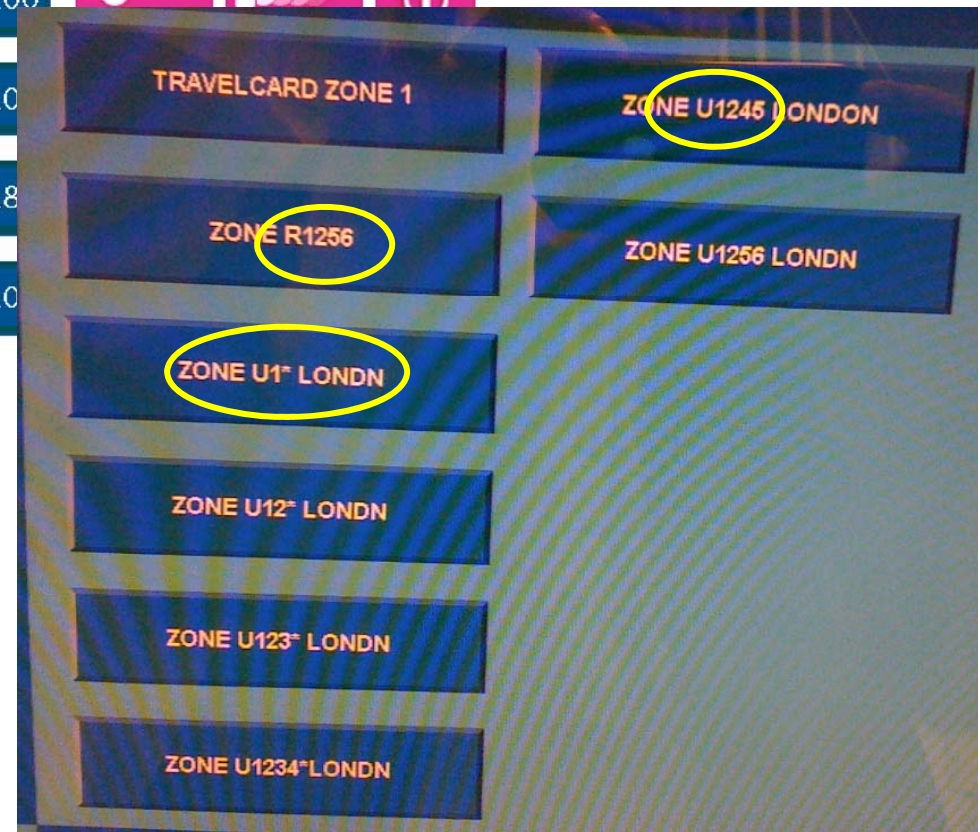


Video – zones 2-6 (3min)

Welcome to FastTicket. Popular Tickets.  
Prices shown for one adult.  
Please select from the other options for alternatives.



LONDON TERMINALS	First Anytime Single	£132.00			
LONDON TERMINALS	Anytime Return	£159.00			
LONDON TERMINALS	Off-Peak Return	£59.00			
LONDON TERMINALS	Off-Peak Day Single	£34.00			
BRISTOL AIR BUS	Bus Day Single	£6.00			
LONDON TERMINALS	Super Off-Peak Return	£48.80			
LONDON TERMINALS	Super Off-Peak Single	£28.00			



# A-Z Destination finder


ANDOVER. Please select your destination LIP \_\_\_\_\_ SOUTH WEST TRAINS

A	B	C	D	E	LIPHOOK
F	G	H	I	J	LISKEARD
K	L	M	N	O	LISS
P	Q	R	S	T	LITTLEHAMPTON
U	V	W	X	Y	LITTLEHAVEN
Z	SPACE				LIVERPOOL STNS

One Step Back  
Start Again

12.04.10 08:39 Delete last letter Delete all

↑ ↓



Customers first





Video – HS1 (4mins)

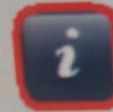
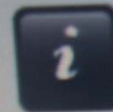


# Selecting ticket options

## Select your preferred route

ANY PERMITTED

NOT VALID ON HS1



ROUTE NOT VALID ON HS1  
- excluded locations:  
EBBSFLEET INT SE,  
STRATFORD INT SE

Standard Super Off-Peak Return £ 72.70

Standard Off-Peak Return £ 88.00

Standard Anytime Return £ 216.00

First Anytime Return £ 332.00



Outward journey is made on date shown on ticket and Return within 1 calendar month. Travel time restrictions apply.



Outward journey to be made on date shown on ticket and Return within 1 calendar month. Travel time restrictions apply.



Outward journey to be made on date shown on ticket and Return within 1 calendar month. No time restrictions apply.



Outward journey is made on date shown on ticket and Return within 1 calendar month. No time restrictions apply.

# Changing Details

The screenshot shows a railway ticket booking interface with a dark blue background and yellow text. On the left, there is a vertical sidebar with three buttons: 'Show Basket' (top, grey), 'One Step Back' (middle, black), and 'Start Again' (bottom, black). The main content area is divided into sections: 'Journey Details' (LONDON TERMINALS, ANY PERMITTED ROUTE), 'Fare Details' (Standard Anytime Day Single, Valid for a single journey on the day of purchase), 'Passengers' (Adult £ 27.00, No Child), 'Railcard' (No Railcard selected), and 'Restrictions' (No Restrictions). A yellow arrow points from the 'Restrictions' text to the 'Start Again' button. On the right, there is a 'Change for:' section with four buttons: 'Adult' (grey), 'Child' (black), 'More Passengers' (black), and 'Railcard' (black). Below these is an 'Other Ticket Types' button. At the bottom, there is a dark blue bar with three buttons: 'Add to Basket AND select Car Parking' (left, yellow), 'Add to Basket AND select another Ticket' (middle, yellow, circled in red), and 'Confirm Your Selection' (right, yellow). The date and time '12.04.10 08:38' are displayed in the bottom left corner.

**Show Basket**

**Journey Details:** LONDON TERMINALS  
ANY PERMITTED ROUTE

**Fare Details:** Standard Anytime Day Single  
*Valid for a single journey on the day of purchase*

**Passengers:** Adult £ 27.00  
No Child

**Railcard:** No Railcard selected

**Restrictions:** No Restrictions

**Change for:**

Adult  
Child  
More Passengers  
Railcard

Other Ticket Types

12.04.10 08:38

Add to Basket AND select Car Parking

Add to Basket AND select another Ticket

Confirm Your Selection



# Confirmation

The screenshot shows a user interface for East Midlands Trains. At the top left, it displays 'LONDON ST PANCRS' and 'Zone 1'. The top right features the 'EAST MIDLANDS TRAINS' logo. The main header area says 'You have selected:'. Below this, 'Journey Details: NOTTINGHAM' is visible. A central white box with a yellow border contains the text: 'Please press the 'Confirm Your Selection' button to purchase your ticket or touch here to clear this message'. An orange arrow points from the bottom right of this box towards the 'Confirm Your Selection' button at the bottom right of the screen. On the left side, there are buttons for 'Show Basket', 'One Step Back', and 'Start Again'. On the right side, under 'Change for:', there are buttons for 'Adult', 'Child', 'More Passengers', 'Railcard', and 'Other Ticket Types'. At the bottom, there are two buttons: 'Add to Basket AND select another Ticket' and 'Confirm Your Selection'. The bottom left corner shows the date and time '26.04.10 16:57'. The 'first' logo is in the bottom right corner.

LONDON ST PANCRS

You have selected:

EAST MIDLANDS TRAINS

Zone 1

Journey Details: NOTTINGHAM

Change for:

Adult

Child

More Passengers

Railcard

Other Ticket Types

Other Ticket Types

26.04.10 16:57

Add to Basket AND select another Ticket

Confirm Your Selection

first

# Disabled Passengers

- Screen glare (windows / lighting) cause problems
- Functional buttons need to be bold and clear
- Text, background colour and contrast impact on usability
- Processing information/route maps is a particular problem
- **Even DDA compliant machines can be difficult for some wheelchair users**

# Recommendations (1)

## Sequencing:

1. Consider more screens with simplified steps
2. Consider A-Z destination finder as first step (with preset hot destinations as an option if required)

## Layout:

1. Reduce volume of information on screens
2. Use colour contrast
3. Highlight one step / screen back option
4. Extend time-out option
5. Simplify the basket function

## Recommendations (2)

### Information and language:

1. Improve labeling and terminology
  - 1st Class (rather than 'First')
  - 5 – 15 on Child ticket button
  - London Zones
2. Help button to provide information / assistance on:
3. Provide a clear confirmation summary (especially what is not included)
4. Provide staff / Floor Walkers for help and reassurance

### Other :

1. Give further consideration to the needs of disability groups

**WHAT NEXT?**



Questions?