

# TICKETING & REVENUE

JUNE / JULY 2019

## UNDERGROUND

### UPDATE #118

For the attention of all Station and Revenue Control staff

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# FAKE NEWS!

Monday 03 June, was a day when the headlines in the Media were very much dominated by the arrival in London of the United States President Donald Trump. However, within London Underground and TfL, the big news item that day was actually about an issue which affected Station Computers (SCs) at a large number of our stations at various times during the day.



The main impact was on customers who had made online purchases and were then not able to pick these up from our gatelines due to an SC failure affecting the operation of the Faster Universal Load (FUL).

To steal a line from Donald Trump, there was a lot of “fake news” disseminated during the day, particularly around the nature and impact of the problem.

We can confirm that contrary to some people’s thoughts and to some reports you might have seen, there was no link with Donald Trump arriving in London, the May Fares Revision or with the transfer of data storage from Cubic to TfL’s Data Centre, which was taking place around this time.

On [Page 3](#) of this edition we provide a more in-depth explanation of what actually happened and the true extent of the problems it caused at station level.

A much better news story was the implementation of the May Fares Revision on Sunday 19 May, which went very smoothly and was implemented with very few glitches.

Our traditional review of the recent Fares Revision and “what went well” and “what didn’t go quite as well as expected” is included on [Page 2](#) inside.

Apologies for Late running.....

*We had planned to publish this edition in early July, but delayed publication, whilst awaiting final decisions on a couple of the issues we had planned to cover. Hopefully we will be a bit more punctual next time round.*

## KEY STORIES INSIDE

### Page 2 [PAYG EXPANSION](#)

*We update you on revised dates for some of the forthcoming expansions of PAYG and correct some information we had published in previous TRUs.*

### Page 8-9 [OYSTER CHARITY DONATIONS](#)

*We report on the recent presentation of the proceeds of the Oyster card donation scheme.*

### Page 16 [GATE POD REPLACEMENT](#)

*We outline details of plans to replace the customer displays on our gates.*

### Page 18-19 [SCU UPGRADE](#)

*We provide a further update on progress update on the initial vanguard and plans for the forthcoming rollout across the rest of the network.*

## FARES REVISION REVIEW



The most recent fares revision was successfully implemented on Sunday 19 May and was probably one of the smoothest revisions for many years, if not ever. There were no issues reported on the morning of the fares revision, with all devices switching over to the new tables as expected. This is any area which has steadily improved over recent years, but a 100% take-up rate is probably a first.

Subsequent testing on the Sunday and Monday failed to identify any significant issues at the stations that were visited, allowing the freeze on changes to be lifted very quickly on Tuesday 21 May.

### So what didn't go so well?

Well there really isn't much to say here, as stated above the implementation went very smoothly. However, one of the changes that were implemented as part of the fares revision, involved changes to "entry thresholds" on Heathrow Express gates at the airport.



Although the new settings were successfully loaded, it soon became apparent that in addition to forcing Oyster customers wishing to avail themselves of free travel between the airport terminals to have the minimum fare from Heathrow on their card to be able to touch-in, the change also impacted on Travelcard holders. Subsequently the change implemented on Sunday 19 May was reverted back to zero as part of a base data load on Sunday 30 June.

## PAYG EXTENSIONS DELAYED

In [TRU117](#), we outlined a number of forthcoming expansions of PAYG acceptance on NR services. As typically happens, not long after publication of this information, the planned dates for the first phases of this work were revised due to delays in getting the station routers installed at these new locations.

The latest information we have is that the first extension of PAYG to Potters Bar and Radlett will now take place on Tuesday 20 August. As previously stated, this will be for both Oyster and contactless PAYG users. This is due to be followed just over a week later by a further expansion northwards to Brookmans Park, currently scheduled for Thursday 29 August. However, in the last TRU it stated that this would also include Oyster, but the extension to Brookmans Park will only be for contactless users. Oyster will not be valid beyond Potters Bar. We therefore need to be careful that we give customers the correct information.

TOCs	Description	PAYG Acceptance for
	On Thameslink to Radlett, (Zone B for capping purposes).	Oyster & contactless
	On Great Northern / Thameslink to Potters Bar (Zone B for capping purposes)	Oyster & contactless
	On Great Northern / Thameslink to Brookmans Park	Contactless only

As there is a chance that implementation will be further delayed, we will publish details of the confirmed implementation dates for each of these in the weekly *Hot Issues Bulletin*. As we also outlined in the last issue of TRU, further expansions of PAYG acceptance on GTR services are planned for later in the year. We will update you on the appropriate dates for these in future editions of TRU.

In the final section of our last PAYG expansion article in [TRU117](#), we touched upon the potential expansion of Oyster and PAYG acceptance on services westwards to Reading, in conjunction with the planned takeover of some Great Western services by TfL towards the end of this year.

We have since learnt that the ticketing arrangements for stations at the western end of the Elizabeth line have not yet been finalised and that the proposals may now not include full Oyster availability beyond Zone 6, as we had originally been led to believe. We will provide more information on this once a final decision has been taken.

Staff should be assured that even if Oyster PAYG acceptance is not extended beyond Zone 6, Staff Oyster cards would be valid for travel on TfL Rail services, but they would be required to present their Staff Oyster and ID for visual inspection if gates at the stations concerned are not set-up to accept them. An updated version of the PAYG map will be published at the end of August to coincide with the first two extensions of PAYG availability.

## WHAT WENT WRONG

As we outlined in this edition's lead article on [Page 1](#), on Monday 03 June we saw a significant failure affecting a large number of our Station Computers. The problems arose due to an issue with the way Faster Universal Load (FUL) files were handled by the Station Computers at the affected stations. Each time an online purchase is made or a refund to an Oyster card is processed, a file is sent to each SC.



Similarly when a customer validates on a gate or PVal and picks up a product or refund, a message has to be sent to all other devices to delete the previous load request.

It was the way in which these many hundreds of old FUL files were being managed by the SC that caused the issue to occur. Over time the number of these old files being stored meant that the SC didn't have capacity to handle any new requests being sent out.

This meant that customers who had made a transaction online or via the Oyster app were unable to pick up their product when they touched in / out at the affected sites.

There were reports of large numbers of stations being "offline" and losing ticket issuing and bankcard acceptance, but these proved to be inaccurate reports. Our ticketing system is designed to allow stations to continue to function, even if a station is "offline" to the central system computers, storing transaction information until the communication link is restored.

In the same manner, individual devices will continue to function even if they lose connection to the local SC. Although POMs require a connection to obtain authorisation for bankcard transactions, this is achieved via a different route to that used for transaction data, so was not affected by this particular failure.

The issue on Monday 03 June was resolved by Cubic manually intervening to clear files from the affected SCs, thereby allowing them to then accept further FUL instructions.

In the short term Cubic have introduced manual processes to prevent the build up of these old FUL files happening again.

In the longer term a permanent fix will be incorporated into a new release of Station Computer software which is required to facilitate our plans for the transfer of Oyster transaction data to use an Ethernet connection in place of the current communications link.

Details of "Oyster over the Ethernet" were included within [TRU116](#), although the timescales quoted have since slipped back and the initial Vanguard will now not take place until August.

The rollout of Oyster over the Ethernet will need to be preceded by a further rollout of the new SC software.



**Part 1** – Linked to our story on PAYG extensions (opposite)...

Q1) In what year was Oyster PAYG acceptance extended to the NR network within the London area?

A 2010

B 2011

C 2013

D 2015

Ticketing & Revenue

**T&R**  
Trivia

Answers on Page 19

## THE CURIOUS CASE OF THE VICTORIA SINGLE

Towards the end of June the T&R Team received a call from Euston station who, having just emptied the capture bins of their gates, had found only one specific type of ticket amongst the hundreds of tickets they'd removed ... *Day Single, Victoria Station, NLC 0722*.

Concerned this may be some type of fraud or ticket scam, the station retained the tickets which were later collected by us for investigation.

It is not too unusual for T&R to receive notifications of devices or products behaving differently to how they are supposed to, but although this looked very suspect on the surface, we were in fact more surprised to learn there had been any tickets captured in the first place. Euston is an Out of Station Interchange (OSI) for both Euston Square and Euston NR stations and as such, all magnetic tickets should be returned back to customers if they have potential onward validity, to allow them to continue their onward journey... including Victoria Day Single tickets.

Victoria LU station has 2 National Location Codes (NLC); these are *Victoria (Vic and North) – 0741* and *Victoria (District) – 0722*, the latter of these was only added in April 2017 (see [TRU99](#)), due to the number of additional ticketing devices that were being added as part of the station's capacity upgrade.

It was only Day Singles bearing the new 0722 NLC that were being retained and tickets issued from the other parts of the station were not affected, which gave us reason to believe that there may have been an issue with the relevant tables not being added to ensure these tickets were given back to customers at stations with LU to LU OSIs. Checks at another OSI station confirmed our suspicions, which were then reported to Cubic. A fix for this will now be included in the September Fares Revision changes, but in the meantime station and Revenue Control staff working on the gateline at OSI stations, should be aware of this issue and should return any tickets wrongly captured, to any customers wishing to continue their journey.



## OLD TICKET ROLL AMNESTY

After more than two years the T&R Team have very nearly exhausted the stockpile of POM ticket rolls that had accumulated across a number of our stations.

All but one of our stations are now issuing tickets on the new design of TfL pink roll stock, with the last station (Oxford Circus) being used as a high usage location to use up the last remaining rolls that are left following the change of each station.

The frustrating part has been that every time we are about to arrange for Oxford Circus to switch over to new stock, we receive a sheepish phone call or email from a station announcing that they have found an old cupboard or store room that contains 'X' number of old rolls, which we then need to arrange to be moved.



Therefore, all station staff are kindly asked to please, please, please check your station's cabinets, broom cupboards and closets under the stairs to check there are no further old rolls laying around collecting dust.

Where rolls are found, please let us know immediately and even though we will throw our arms up in the air and roll our eyes, we will nevertheless be pleased that we have managed to save the 2000 tickets per roll from becoming wasteful landfill.

**Part 2 – The recent opening of Waterloo (Southbank) ticket hall gives the station its third ticket hall, but ....**

Ticketing & Revenue  
**T&R**  
Trivia

Answers on Page 19

**Q2) Which LU station has the most POMs?**

**A** Waterloo      **B** Kings Cross

**C** Liverpool Street      **D** Victoria

## WATERLOO (SOUTHBANK) OPENS

After a number of extended delays, a new entrance to Waterloo Underground station finally opened to the public on Sunday 26 May.

The new Waterloo (Southbank) ticket hall forms part of a large development currently under construction on the site between Waterloo station and the Southbank area, which was formerly occupied by Shell's London headquarters building.



The new ticket hall consists of 11 gates 3 WAGs and a POM Room housing an MFM and 2 AFMs and is linked to the rest of Waterloo Underground station by the escalators that previously served the old Waterloo (Shell) ticket hall which occupied a similar site until it closed and was demolished.

## BROMLEY BY BOW RESUMES FULL SERVICE

Work on the replacement of the station roof resulted in the POMs at Bromley By Bow, being restricted to bankcard only operation since March 2019, as the supports for the scaffolding in place whilst the repairs were being made prevented the rear doors of the POMs being opened.

The period of restricted ticket issuing ended up being a lot longer than originally planned, but customers finally had the option of paying in cash restored, when following relocation of the TOM and SAF, POMs were put back into full operation on Wednesday 10 July.

The station will also have its long awaited cash handling device installed at the end of July. Further details are included on [Page 17](#).



## GATELINE SETTINGS

In [TRU116](#), we reported on the relocation of the Cubic Helpdesk from Salfords (Surrey) to Cubic's Global Operations Centre in Stockton on Tees earlier this year.

As a follow on from this, from Monday 03 June, Cubic also took over responsibility for the implementation of gateline settings for engineering works, special events and other ad-hoc requirements from TfL's Tech & Data Service Operations Desk.

Cubic's team in Stockton will be supplied by TfL, with details of settings required for special events and weekend engineering works, as published in the weekly *Hot Issues Bulletin*. They will also be responsible for dealing with any other ad-hoc requests from Station Staff or Revenue Control Inspectors requiring special settings, or ticket checking to be applied to gates. The contact number will be the same Auto 1610 number currently used for reporting device faults.

In the longer term, the rollout of the new PC based SCU, as outlined in our article on [Page 18](#), will restore the ability to set and remove settings from whole gatelines or individual arrays, straight from the SCU, without the need to phone these through to Cubic.

It is likely that some other functions previously undertaken by The T&D Service Desk will also be migrated elsewhere, as part of an on-going restructuring of the role of this team.





## ITSO EXPANSION

In [TRUI17](#), we provided details of the latest Train Operator (TOCs) to launch their own band of ITSO format smartcard.

ITSO format cards are also widely in use across the country for ENCTS (English National Concessionary Travel Scheme), a nationwide scheme which allows free bus travel for older persons, using cards very similar to London Freedom Passes and bearing a red rose emblem.



There are now also an increasing numbers of areas around the country which have launched their own smartcard schemes under different scheme names many using ITSO format cards. Some schemes cover local bus travel, whilst others offered by some of the main UK bus operators who also operate rail franchises offer both rail and bus travel on the same card. Some examples of smartcard schemes in operation outside of London are:

Swift (Birmingham)	Walrus (Merseyside)	Holdall (Norfolk)
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On the rail network, apart from the ability to load Travelcard products onto an ITSO card in a similar manner to Oyster, a number of TOCs have also started to offer other ticketing options such as Point to Point season tickets and multiple journey options similar to our PAYG but these are restricted only to TOC services and are Not valid on TfL services.



It is also now possible for customers to buy Single and Return tickets for certain NR journeys and load these onto their ITSO card, rather than using a traditional paper ticket. At LU stations where our gates give access to NR platforms, the gates will accept these ITSO based tickets, but staff should be aware of a potential issue recently highlighted to us, where a card may be rejected as a result of the customer not having touched out at the end of a previous journey when using a Single / Return ticket.

In this particular scenario, despite having a current valid ticket on their card, the gate reader is likely to detect the previous ticket and reject it as being invalid (as it was then out of date), even though there is a valid product on their card. Checking the customer's card on a POM should also show the presence of the valid ticket on the card.

Although all of our gates have the capability of processing ITSO cards and POMs and TOMs can read these cards, our MOVie devices were unfortunately never updated to do so, even though most NR MOVie devices were updated.

This upgrade was funded by the Department for Transport (DfT) as part of their support for the rollout of ITSO ticketing across the country, but did not cover LU equipment.

We are still pursuing options to get a proportion of our stock of MOVie devices upgraded for future use. This would then allow gateline staff at some of our busier locations which have large numbers of ITSO card users, to be able to more easily check any cards which are rejected by the gates.

The main driver for this is to ensure that we are able to accept ITSO cards when ticket acceptance is in place during service disruption or when planned engineering work is taking place.



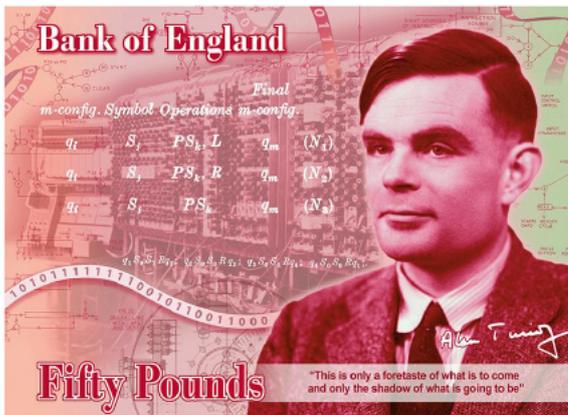
**1p AND 2p TO STAY**

We don't accept either of these coins through our POMs, a lot of people find them a bit of a nuisance and until recently their future appeared to possibly be in doubt. Proposals to withdraw these coins were made in 2015 and more recently the Treasury had argued that retaining large numbers of these low value coins, was inefficient and expensive, with many coins being lost discarded or stored in piggy banks rather than being used.

At the end of May their future was assured for the time being when the Chancellor Philip Hammond confirmed that the government committed indefinitely to not changing the types of cash in use. Opposition to plans for the withdrawal of these coins had been led by small businesses, charities and groups representing older and vulnerable people and a consultation exercise concluded that about 2.2 million people in the UK are still reliant on the use of cash.

Natalie Ceeney, the chair of the access to cash review, said: "Cash use is falling rapidly, but digital payments don't yet work for everyone. If we sleepwalk into a cashless society, millions of people will be left behind." Small business owners had also highlighted the importance of pricing items ending 99p in making sales more appealing to prospective customers than a round pound.

**NEW £50 NOTE REVEALED**



The fate of the £50 note had also been in doubt until recently, with Government concerns over the use of these notes for money laundering and other criminal activity. Following the Chancellor's confirmation there were no plans to withdraw the highest denomination of note, on Monday 15 July, the Bank of England unveiled a new polymer design due to be issued in 2021.

Following public consultation - where people were asked to nominate outstanding figures from the field of science to appear on the new note, it was announced that the new notes would carry the image of computer pioneer and wartime code-breaker - Alan Turing.

Before that of course, the Bank of England will be releasing the polymer version of the £20 note early next year. Plans to further upgrade our equipment for the new notes are currently taking shape.

**EXPRESS VALIDATION – NOT GOING TOO QUICKLY**

In [TRU116](#) we reported on a new release of card reader (RTD) software which would include an enhancement that would potentially improve the experience of customers using contactless payment on Apple devices.

Once implemented an upgrade to mobile devices would avoid the need for users to have to open their payment app and select their card before validating.

This was referred to as "Express Validation" as it will potentially speed up these transactions at the gateline or when boarding a bus, both for the user and for other customers behind them.

Unfortunately an issue with this version of the reader software, mainly affecting bus validations, resulted in a decision being taken to revert all readers across the network back to the previous version of software in early April, as we reported in [TRU117](#).

Since this took place, progress towards the re-deployment of the Express Validation software has been slow. This has been partly due to the need to deploy other software changes, as covered elsewhere in this edition of TRU (see [Pages 13 to 15](#)), plus the need for more extensive testing to take place to ensure that there are no further issues with the reader when it is deployed. These have led to further delays to this project.

Currently we are looking to run a further short Vanguard prior to a network wide deployment of new version of the reader software, probably after completion of the September Fares Revision.



## CHARITY UPDATE

In May, following the end of the 2018-19 financial year, we carried out an exercise to reconcile the proceeds of refunds processed on Oyster cards donated via the Oyster card donation boxes, since we last made a payment to our nominated charity Railway Children in May 2018.

Unfortunately it has been a bit of a tough year for the scheme, with a combination of the continued switch from Oyster to contactless, the ability of customers to get a self-service refund from a POM, damage to a number of our collection boxes on stations and additional boxes we had been promised by TfL to allow the scheme to expand failing to materialise.

As a result the amount raised through the scheme over the last year dropped considerably compared with previous years, as illustrated in the table below, we disappointingly had no contributions from Kings Cross at all.

It should be noted that some of the previous payments below, covered periods of more than one year.



Station	2008-10	2010-12	2013-15	DfID 2015-16	2016-18	2018-19	Total
KINGS CROSS	£5,771.39	£2,454.85	£25,242.54	£3,150.00	£5,336.69	£0.00	£41,955.47
VICTORIA	£91.71	£0.00	£0.00	£0.00	£0.00	£0.00	£91.71
EUSTON	£385.84	£0.00	£0.00	£0.00	£0.00	£0.00	£385.84
HEATHROW	£4,612.23	£40,053.00	£23,740.27	£4,914.41	£31,276.40	£3,796.96	£108,393.27
LIVERPOOL ST	£8,056.84	£9,349.63	£18,765.10	£3,336.33	£9,700.76	£1,599.26	£50,807.92
Corporate	£0.00	£0.00	£0.00	£0.00	£10,687.90	£242.93	£10,930.83
Southeastern	£0.00	£0.00	£0.00	£0.00	£0.00	£5,891.51	£5,891.51
<b>Total</b>	<b>£18,918.01</b>	<b>£51,857.48</b>	<b>£67,747.91</b>	<b>£11,400.74</b>	<b>£57,001.75</b>	<b>£11,530.66</b>	<b>£218,456.55</b>

On a slightly more positive note, our recent donation of £11,530.66 to Railway Children was swelled by a large batch of discarded cards kindly donated to us by our colleagues at Southeastern.

The deposits and small amounts of PAYG on these unregistered cards helped to compensate for the reduction in the number of cards received through donation boxes at Kings Cross, Liverpool Street and Heathrow T2&3 and Terminal 4. The breakdown of the proceeds from each site is shown in the table to the right.

Station	No of cards	Ave per card	Total donated
HEATHROW	431	£8.81	£3,796.96
KINGS CROSS	0	£0.00	£0.00
LIVERPOOL ST	224	£7.14	£1,599.26
Other sources	76	£3.20	£242.93
Southeastern	2,233	£2.64	£5,891.51
<b>Totals</b>	<b>2,964</b>	<b>£3.88</b>	<b>£11,530.66</b>



This year's cheque was presented to Dave Ellis, Corporate Partnerships Manager for the charity at the Railtex Exhibition at the Birmingham NEC on Wednesday 15 May.

After receiving the cheque for £11,530.66, Dave said:

*"Once again we are incredibly grateful to Alan, his team and to the station staff from the Liverpool Street and Heathrow areas, who have helped by processing batches of donated cards for their fantastic support of the Oyster Card Donation scheme. When you consider that its costs just £20 for one of our trained workers to provide an hour of 1 to 1 family work for a child or young person, it highlights the incredible difference the Oyster scheme is making in children's and young people's lives every single day."*



## CHARITY UPDATE continued...

Our donation will help Railway Children to continue their valuable work in India, East Africa and increasingly also here in the UK. As normal we asked the charity to provide some background information on their work and some of the recent initiatives that are being launched, to show how important donations such as this and the customer overpayments on our POMs can help their work.



Railway Children have recently launched their third UK project in Leeds - looking out for children who are at risk on and around the rail network.

This builds upon work started in 2016 at Manchester Piccadilly, followed by a project at London Euston in 2018. Through these two schemes they have been able to help hundreds of young people and keep them safe from harm.

Some have been running away from care or home or groomed by people planning to abuse them. Many have been exploited by criminal gangs into transporting drugs and money on the railways and others were just found at the station struggling with their own mental health issues.

Wherever they have been located, the charity has been able to make a difference.

The team based in Leeds can reach more of those vulnerable children and change the situations they are facing before it's too late. In the last year, through a partnership with British Transport Police, Railway Children have taken referrals of 836 young people they found in dangerous situations.

Working with them and their families they have been able to provide a vital turning point in their lives whether just offering advice and support or working with them longer term with intensive counselling.

Through these schemes they have helped 40 children at risk of suicide, 35 who were caught up in child sexual exploitation and 64 who were being used for drug trafficking. All of them were in dangerous situations they were struggling to escape from. Now the charity will be able to also offer that same help to young people across Yorkshire and Humberside – the third stage of a plan to create a safety net for these children across the country.

Dave Ellis explained to TRU:

*“Our approach in the UK is the same as when we work in India and Africa.*

*We start by making sure children are safe, and then we work with them to find out why they were in such a dangerous situation.*

*Once we've made sure of that change we know they won't put themselves at risk again. It takes time but the impact lasts a lifetime.*

*We already know our new team in Leeds will work with over 200 vulnerable children in their first year – children being bullied, children feeling suicidal, children caught up in gangs, children being abused – they may not look as vulnerable as those we meet living on the streets overseas, but their needs are just as great.”*

So looking forward, we are planning that in the next year we will be able to replace damaged boxes and expand the scheme with rebranded versions using more striking artwork, as illustrated to the right. Similar images will also be used on boxes developed for a scheme to install collection boxes within the terminal buildings at Heathrow Airport, scheduled to be launched in early September.

Finally, we are also hopeful of eventually being able to implement an option for customers to be able to directly donate the proceeds of their Oyster card via the MFM, in connection with planned software changes early in the New Year.





Got a ticketing and revenue related question, problem or simply noticed something you think your colleagues should know about?  
Why not test the knowledge of Olly - our resident ticketing guru.



From: [REDACTED]  
Sent: 28 May 2019 08:56  
To: Ask Olly  
Subject: Oyster Query

Hi Olly,

We seem to be getting quite a number of customers travelling from SWR and claiming to have tapped their bank cards at the start of their journey but have inadvertently tapped out with a PAYG Oyster.

When the Oyster is presented to staff on the gate line, they are inclined to void the transaction on good faith – as we are used to customers showing us their valid NR tickets for the journey they have just made on SWR. With the bank cards, we do not have a way of confirming if they have actually been used at the start of their journey, can you please advise on the appropriate procedure?

Regards,

[REDACTED]  
[REDACTED]  
Waterloo Area

Hi [REDACTED],

In the circumstances you describe, there is no way of verifying the customers story at the station, or of being able to resolve the potential incomplete journey made using contactless payment.

The best advice is to get the customer to contact the Customer Contact Centre, but they will need to be advised to leave at **least 24 hours** before doing so, to allow all the data to be available to resolve their issue.

The customer will be able to register both their Oyster and contactless cards online and submit a webform through their registered account.

It is worth noting that if the customer makes the same journey using contactless all the time, then the back office system may automatically complete their journey and charge the customer's contactless card correctly based on their previous journey pattern.

They would still need to get the contact centre to resolve the incomplete Oyster journey.

Hope this answers your query.

Regards

*Olly Oyster*

Hi [REDACTED]

Thank you for your email and query.

Yes the new SCU does have the facility to receive and display messages of the nature you describe, although we have identified during the current Vanguard that once viewed, the message disappears and is not stored as it was on the old style of SCU. This is an issue we are currently reviewing with Cubic.

Just to make you aware that due to some recent organisational changes, the reporting of reduced ticketing facilities and the sending of SCU messages is due to be moved from the T&D Service Desk.

Further details of this change were published in the Hot issues Bulletin and are included on **Page 5** of this edition of the T&R Update.

Regards

*Olly Oyster*

From: [REDACTED]  
Sent: 03 June 2019 07:53  
To: Ask Olly  
Subject: New SCUs

Hi Olly,

At the moment, if a station has ticket issuing problems we notify T&D on 55794 and they send out a SCU message to stations.

With the new hardware rollout due soon, I was wondering whether SCU messages will still be available on the new generation touch screen SCUs?

Regards,

[REDACTED]  
[REDACTED]  
Kentish Town Area

From: [REDACTED]  
Sent: 30 May 2019 17:12  
To: Ask Olly  
Subject: **Seek Assistance**

Good Afternoon,

Working in the ticket hall for many of us is extremely busy and customers constantly approach staff saying the machine says seek assistance, when I ask the passenger what the gate said they unanimously respond "seek assistance" which ends up as all having to go and recheck the error code together on a gate or attend the POMs which for staff in busy stations can be more time consuming.

I do not know if the message of seek assistance being more bold and remaining on the POD screen unlike the smaller please top code 36 which disappears after a few seconds is distracting to the passenger or if the entirety of the message is too long and people just don't read it in time but the result is the same.

So the question is really can we either have the smaller message at the bottom of the POD remain on screen for as long as the seek assistance message or can we simply do away with the seek assistance message altogether so our customers can focus the more relevant information at the bottom of the POD.

Regards

[REDACTED]  
[REDACTED]  
Hammersmith Area

Hi [REDACTED]

Thank you for your email and observations regarding the information that appears on gate displays.

At present the three types of gate we have at LU stations all have different types of POD, so there is a level of inconsistency with the information actually displayed to customers.

On E1 gates the description of the reason the ticket has been rejected appears immediately below the seek assistance text, but on the older pneumatic gates there is no information at all other than the 2 digit reject code for staff, which only appears on one side of the POD.

We are currently in the early stages of a project which will see the current PODS on both E1 and Pneumatic gates replaced with the unit currently fitted on the newer E2 gates.

This should at least give our customers a more consistent level of information regarding their card balance and the reason why, if their card is rejected.

Further information on this will be provided in future editions of the TRU.

Regards

*Olly Oyster*

Hi [REDACTED]

Thanks for highlighting what has turned out to be an interesting issue.

The POMs at Rayners Lane are in fact functioning in line with devices at other stations. The confusion you have highlighted seems to be that the prices quoted on screen are for the minimum purchase rather than one ticket.

In the case of Family & Friends you have to buy at least one adult and one child ticket and for two together you obviously have to purchase two tickets, otherwise you are not entitled to the discount.

If you go beyond the screen that you photographed and select the actual product, the POM screen will then display the number of tickets automatically selected.

We can see that this could cause a bit of confusion and have asked Cubic whether at some point in the future, they would be able to display the minimum number of tickets at the time the price is initially displayed.

Hope this explains these strange prices and thanks again for highlighting something we weren't aware of.

Regards

*Olly Oyster*

From: [REDACTED]  
Sent: 28 April 2019 17:20  
To: Ask Olly  
Subject: **Fare Error. Friends & Family Railcard discount**

Hi Olly,

I've found a fare error on the POMs at Rayners Lane when trying to apply the Friends and Family Railcard discount to the Day Travelcard (Off Peak). The POMs are showing an incorrect price.

The discounted price is showing as £11.10 when it should be £8.60, whilst the full price version is showing as £19.60 when it should be £13.10.

The problem is only with Friends & Family discount, all other railcard options showed the correct price.

Kind regards

[REDACTED]  
[REDACTED]  
Harrow on the Hill Area

## PRIORITIES FOR 2019 / 2020

Most TRU readers will be aware that the company is under significant financial pressure, as a result of the current freeze on fares that are set by TfL together with the removal of central government subsidies we previously received.

As a result of these changes, the investment that the network requires to maintain and improve our services will in future need to be met from other income streams and by improving our operating surplus to fund these improvements.



This can be achieved through on-going initiatives to achieve cost reductions, by getting the best value for the money that we spend and by maximising the revenue we collect.

Those of us working in the stations part of the business are probably best placed to help with maximising our revenue and within this current financial year we will be looking at the following priority areas, where we can improve:

Issue	Action
[Redacted]	[Redacted]

In future editions of the TRU we will focus on some of these individual topics and in our next edition we will take a more detailed look at Account Discrepancies, some of the common reasons why these occur and how to avoid them.

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## QBM SOFTWARE UPGRADE

Following a Vanguard of a new version QBM software on 5 QBMs in March, as we reported in [TRU116](#), the new software was successfully deployed to all of the other QBMs during a short rollout programme between the nights of Thursday 23 May and Tuesday 28 May, with all 118 of our QBMs using the new software from start of traffic on Wednesday 29 May.



We had been hopeful that the deployment of the new software would improve QBM performance and reduce instances of PED (Chip & PIN unit) faults when compared to the previous software version which has been in use since it was deployed to devices in autumn 2017. However, we have recently learnt that the recent QBM release did not contain all of the fixes incorporated into the later AFM and MFM releases. So it is likely that a further QBM software upgrade will follow shortly.

## POM SOFTWARE UPGRADES

Following on from the completion of the software upgrade on the QBM, Cubic have developed similar software updates for both the AFM and MFM. These were principally to address the same PED error 91 and 96 issues as on the QBM, but the relevant software releases also included a number of other changes as outlined below.

The new software was initially deployed to 5 AFMs on Wednesday 05 June, which had seen high levels of these error codes. Unfortunately due to the Station Computer issues outlined in our lead article and on Page 3, the deployment of the AFM software took place 48 hours later than originally planned.



After a week the software was deployed to the other 38 AFMs at these locations and bringing in devices at two further stations; Waterloo (Colonnade) and London Bridge. This brought the Vanguard to a total of 43 AFMs.

The Vanguard showed a noticeable improvement in device performance, an increase in bankcard transactions and a sizeable reduction in error 91 and 96 faults reported by these devices, as illustrated in the graph below.



Approval was given for this version of AFM software to be deployed to all other AFMs from Tuesday 09 July, with 20 AFMs the first night and then further batches of 50 AFMs each night from Wednesday 10 July through to the night of Monday 22 July (excluding Saturday nights), when the final devices are due to be upgraded.

At around the same time we also deployed a new version of MFM software as a Vanguard to 5 MFMs which again had seen previous high levels of the PED errors above. The initial Vanguard took place at Brixton, Kings Cross (Tubes & Western), Leicester Square and Westminster from Tuesday 04 June.

From Tuesday 11 June, like the AFM, this MFM Vanguard was extended to cover the other MFMs at these Vanguard locations, bringing the total to 15 MFMs.

During the first weeks of the Vanguard a reduction was seen in the number of PED faults and an increase in the volume of bankcard transactions but several of the devices with bank Note Recyclers (BNR) suffered from other faults which worsened availability. As a result, instead of approving the rollout across the remaining MFMs it was instead agreed that we would first expand the Vanguard from 15 devices to 35 MFMs. This brought the Vanguard to around 10% of MFMs and to enable a further period to monitor the performance of the upgraded units. The Vanguard was further extended to another 50 MFMs on the night of Wednesday 17 July, which will then hopefully lead on to a full rollout at a rate of 50 MFMs per night between Wednesday 24 and Monday 29 July.

# REVENUE PROJECTS

## TVM SOFTWARE UPGRADE

COMPLETED ✓



Following a Vanguard which had been running since the end of March on a number of TVMs spread across all TfL modes and including a couple of TVMs at our RSLU sites, approval was given for the deployment of updated TVM software to all devices.

The latest TVM software release includes the Error 91/ 96 fix previously deployed to QBMs and currently being deployed to both AFMs and MFM's (as outlined on [Page 13](#)). It also includes a number of other fixes to address known issues in the previous software and to improve general TVM performance.

- Fix to allow device to continue to an interrupted file download from the point it stopped, rather than restarting the whole download again
- Fix to ensure all changes of Note Vault ID are detected by the device
- Correction of reporting of Error 44 (THU Stock low) previously wrongly reported as Error 40
- Addition of "Last Kept value" to operator sign-on screen and retention until user signs off
- Rectification of issue that resulted in selected tickets not clearing when back button selected

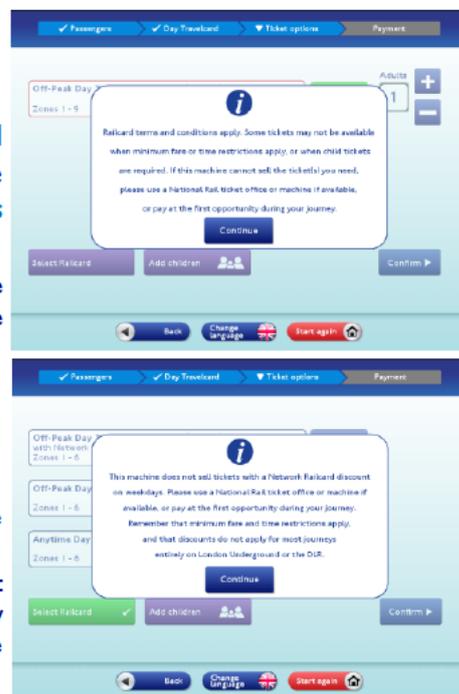
The new software was deployed to bankcard only TVMs at Bond Street and South Woodford during engineering hours on Thursday 06 June and was then downloaded to all other TVMs via a download which took places during traffic hours of the week between Monday 10 June and Thursday 13 June 2019.

The new software was downloaded remotely after the morning peak period, but as it included new software for the TVM's note unit, it required each device to have its note unit serviced immediately after the upgrade has taken place.

## POM SCREEN UPDATES

Since the publication of the last TRU there have been a number of POM Screen changes made as part of scheduled Base Data Loads across the network. These were originally communicated in the weekly *Hot Issues Bulletin*, but are worth collating and repeating here.

- (02 June) – Correction to the screen message shown on the POM following the successful printing of tickets, followed by a failure of the printer before the receipt had been printed
- (26 June) – Corrections to the screen messages shown on the POMs to;
  - Add an information message when a Network Railcard is selected.
  - Add an information message near to the "Select your railcard" option.
  - Correct an issue to Platform ticket issuing at 5 stations with multiple NLC's
  - To bring the screen graphics on all POMs at the LU Training centre in line with all other LU POMs.
- (14 July) – Corrections to a number of foreign language screens where text changes have previously been made, but where the revised text was only displayed in English, has been updated with the text translated into each of the languages offered on POMs.



Part 3 – Following on with the subject of POM language options..

Q2) Which of these languages are not currently available on our POMs?

A Portuguese

B Polish

C Dutch/Flemish

D Russian

Ticketing & Revenue  
**T&R**  
Trivia

Answers on Page 19

## GATE UPGRADES

The lifting of the change moratorium following implementation of the May Fares Revision started a surge of upgrade work, which we had been awaiting deployment to station devices. Details of some of these programmes are shown below:

### E1 GATE SOFTWARE UPGRADE

Following an initial Vanguard on the 14 E1 gates within the Waterloo (Colonnade) ticket hall which started in March, we reported in [TRU116](#), that we had hoped to deploy the new E1 gate software across the network in mid-April.

Unfortunately deployment had to be deferred until after the May Fares Revision and instead of rolling the software out to all stations, a decision was made to instead extend the Vanguard to four further stations with E1 gates, all of which, like Waterloo (Colonnade) were already involved in a separate Vanguard of new Paddle Control software.

The updated software was successfully deployed to a further 23 gates at the stations listed below, on the night of Monday 01 July, ready for use from the start of traffic on Tuesday 02 July.

ACTON TOWN	BERMONDSEY	WESTMINSTER
------------	------------	-------------

The Vanguard was then further extended to an additional 73 gates at the further seven sites listed below, on the night of Wednesday 10 July, bringing the extended Vanguard to a total of 110 gates.

BANK (Waterloo & City)	CAMDEN TOWN	CANADA WATER	HAMMERSMITH (C&H)
NORTH GREENWICH	PADDINGTON (Main)	SEVEN SISTERS	

The performance of all of these devices is currently being reviewed to gauge the improvement in the level of Error 01 and reader issues seen, along with the impact on general gate performance. Approval was given for the deployment of the software to all E1 gates on the night of Saturday 20 July, so that all devices will be using the new software from Sunday 21 July.

### VANGUARD OF E2 GATE SOFTWARE

Following hot on the heels of the deployment of the E1 software, a further Vanguard of a new version of software for E2 gates was also deployed to a total of 30 E2 gates and WAGs at Embankment, Euston Square and Stratford (North) on the night of Monday 01 July.

Like the E1 Vanguard (above) these sites had been picked as the E2 walkways at these stations were already being used for the E2 Gate Paddle Control Software Vanguard.

All E2 gates had already been upgraded with new software to reduce instances of the Error 01 battery problem, but this was deployed across the network before a number of other fixes to address a number of "short duration faults" on the RTD were available for deployment. The latest E2 software release brings them into line with software already deployed to all pneumatic gates and to the E1 Vanguard stations above.

This keeps the number of different permutations of equipment and software to a minimum and ensures that the Vanguard sites are operating with the latest versions ready for its eventual deployment.

Like the E1 Vanguard, the number of E2 gates running on this latest software version was expanded to 63 gates at five further sites listed below, on the night of Wednesday 10 July, then bringing the extended Vanguard to a total of 93 E2 gates.

FINSBURY PARK	HIGHBURY & ISLINGTON	MOORGATE
OLD STREET	VAUXHALL	

This brings the Vanguard to almost 10% of the total number of E2/WAGs and allowing a good representation of the general impact of the new software version. All being well, the software should then be deployed to all other E2 generation gates in early August.

# REVENUE PROJECTS

## E2 GATE BELT... UPDATE

In [TRU117](#) we outlined plans by Cubic to replace all of the belts within the ticket transporters (UTT) of E2 gates with belts made from a new material, at a number of locations. This was following on from an initial Vanguard at Farringdon, Kings Cross (Northern) and some gates at Liverpool Street (Main).

Unfortunately, delivery of supplies of the new design of belt was delayed, preventing the Vanguard from being extended in early June as we had expected.



However, the supply of belts did arrive in time to allow the Cubic workshop to fit these to sufficient UTT units to allow the deployment to the next batch of stations to commence during week commencing Monday 08 July, when a total of 43 gates at Blackfriars, Kings Cross (Western) and Kings Cross (Tube) gatelines were upgraded over a 4 night period.

The units removed from these sites will be overhauled and fitted with the new design of belt at the Cubic workshops ready for them to be installed at a second batch of stations; Liverpool Street and Stratford (North) from Monday 22 July and then the final batch of gates at Tottenham Court Road and Wembley Park in August.

When all have been completed, this would then bring the number of E2 gates with the new belts to just under 200 devices.

## POD REPLACEMENT

As part of an on-going requirement to refresh assets and ensure obsolete parts are replaced, Cubic are currently looking at the replacement of the Passenger Oriented Displays (PODs) on E1 and the older pneumatic gates.



### PNEUMATIC GATES

- have very old displays which can only display a very limited number of fixed messages. Reject codes are only displayed on one side of the POD and the customers Oyster balance and other messages only appear on a separate display attached to the RTD on exit gates.



P-GATE POD

### E1 GATES

- although the POD on this gate is better, we have had long standing concerns about the visibility of the display, particularly at stations where there is bright sunlight in the ticket hall. A number of the Jubilee Line Extension (JLE) stations have these issues and in May 2013, we trialled a brighter POD display on gates at Bermondsey.



E1 GATE POD

Rather than developing replacement PODs for both types of gate, Cubic are planning to install this current E2 gate POD on both pneumatic and E1 Gates.

This requires some modification to the pneumatic gate to achieve the POD being at the correct height for customers and also changes to software to allow the LCP on both types of gate to interact with either the E2 or existing POD

Testing of the new POD arrangements has started recently and the current plan is to Vanguard the new E1 POD arrangements at Balham in late August and the new Pneumatic gate set up at Marble Arch at the end of September.



MODIFIED E2 GATE POD



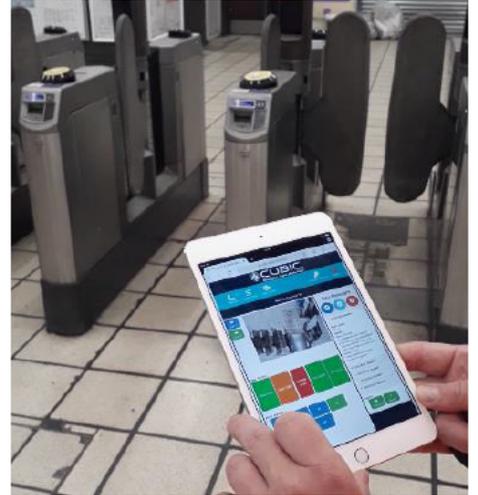
E2 GATE POD

## INTELLIGENT GATELINE TRIAL

Further to our previous reports in [TRU114](#) and [TRU116](#), the Intelligent GateLine technology trial finally got under way at Blackhorse Road on Monday 17 June.

Staff working at the station are now able to review and accept or reject suggested changes to the configuration of the gateline when cameras situated on the ceiling of the ticket hall, identify the need to change the mode in which gates are operating.

As previously outlined, the trial is aimed at establishing the operability of this type of technology within the rail industry as a whole and is externally funded by the Rail Safety and Standards Board, rather than being an LU or TfL project. A second trial site at Marylebone (NR) is yet to go live.



By basically having a portable SCU, initial feedback is that gateline staff using the Cubic device (illustrated above) have found some of the facilities offered useful. We have had one significant failure of the equipment since it went live, possibly caused by the amount of data being logged and stored by the server, which basically resulted in disk space being used up fairly quickly. The hardware concerned has since been replaced and steps are being taken to reduce the amount of information being retained to ease the pressure on disk space.

The current trial continues until September 2019, after which the equipment will be removed from the stations and results of the trial evaluated.

## CHD CHANGES



It is now over 5 years since we installed the first Cash Handling Device (CHD) at Acton Town and almost 4 years since we commenced the rollout of the CHDs across the network. However, the final device procured as part of that initial rollout isn't actually scheduled to be installed until Monday 29 July 2019.

The final device is scheduled to be delivered to Bromley By Bow, having been held in store since 2016 due to on-going building works at the station (see [Page 5](#)).

On the same night, Suzohapp will also be replacing the second of the four "slimline" note acceptor units which were installed as part of the original rollout. The unit currently in use at Kilburn will be replaced by a standard note recycling unit, bringing this station into line with the majority of our other stations. The work will also require the relocation of the whole CHD within the secure suit to provide enough space for the new Note Recycler to be installed.



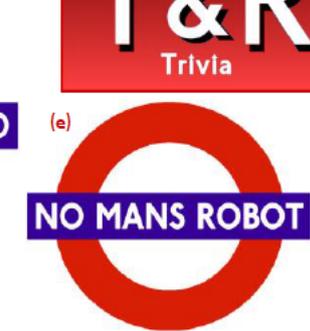
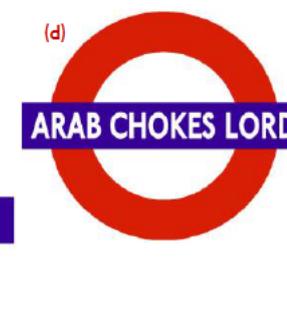
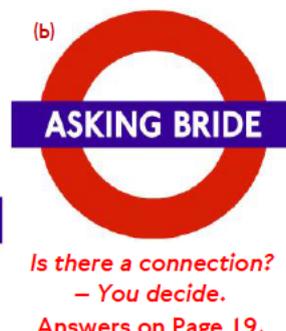
The final two "slimline" units (at West Ruislip and Chorleywood) will hopefully also be swapped out later in the year, once we have sufficient Note Recycler units available. These units which utilise pouches rather than collection sacks, have suffered some reliability issues, as well as issues with custodians not completing the collection process correctly.



**LAL MXIDE PU**

Part 4 – We've mixed up the letters in these station names. Can you work them out?

Ticketing & Revenue  
**T&R**  
Trivia



# REVENUE PROJECTS

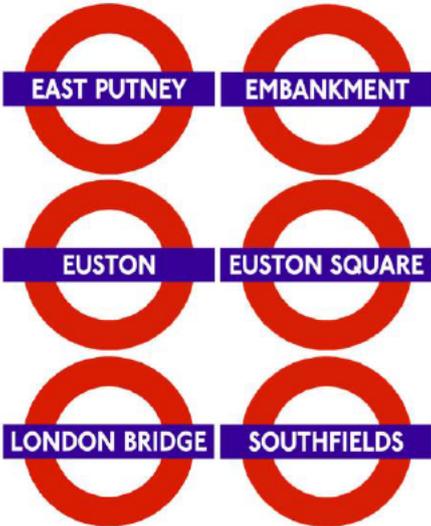
## SCU UPGRADE GETS ROLLING

Since our last report in [TRU117](#), the much delayed Vanguard of the new PC based SCU has finally got underway, with the successful installation of the new equipment at Euston, Euston Square, Embankment, London Bridge and Southfields.

After a series of different delays which prevented the start of Vanguard for almost a year, it has been encouraging to at last get the equipment out onto our stations for staff to use.

The initial feedback from members of staff at the Vanguard stations has been very positive, with users finding the new SCU to be:

- *A great improvement on the previous SCU*
- *Very easy to use*
- *Clear to see issues on devices when they occur*
- *Much quicker to make changes to devices and whole arrays.*



Feedback from users and the experience of installing the equipment at all six Vanguard stations has helped highlight a number of changes that we would like to make to some of the screen icons, how information is displayed and the level of detail that needs to be included within the Installation packs that are supplied to the Cubic engineers undertaking the actual installation work.

During the next few weeks we will be working through these issues with Cubic to hopefully adopt as many of the suggested improvements as possible within the planned rollout.

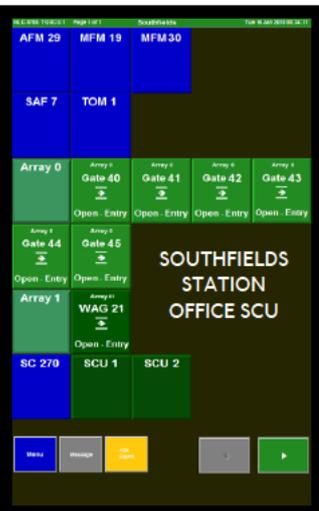
The SCU Vanguard at the six stations was scheduled to run until the end of June, four weeks after the final Vanguard installation at London Bridge on Wednesday 29 May, but this has been extended until final approval to start the rollout to all other LU sites is given. Although operationally we are happy to install the new equipment there are some contractual issues between Cubic and TfL's Tech & Data team that need to be finalised before the rollout can start.

In the meantime, we are continuing to prepare for the start of the wider rollout, by contacting stations in the early part of the rollout programme, to identify base data changes that will be needed to assign gates and WAGs to the correct arrays and to confirm the configuration of the gates for each of three new pre-set formats below, which can be set from the SCU.



EUSTON SQUARE

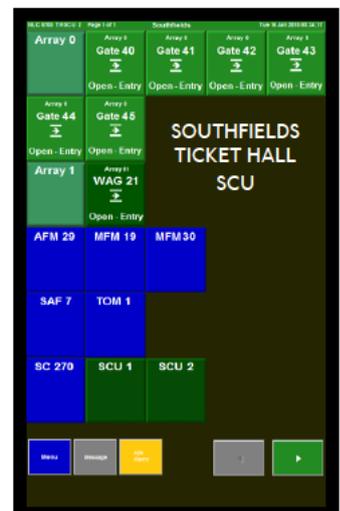
Maximum Entry	Maximum Exit	Custom Entry / Exit Setting
<i>This setting puts all pre-designated gates into entry mode via one command to meet your peak Way-In flow</i>	<i>This setting puts all pre-designated gates into exit mode via one command to meet your peak Way-Out flow</i>	<i>This setting puts gates into the direction of operation you would normally have them (e.g. outside of the peak periods or events etc.)</i>



We have already had some imaginative use of these settings suggested by the areas we have consulted with over stations scheduled in the early part of the SCU rollout.

This includes pre-configured settings for one-way and reverse customer flows at certain stations. So time to get your thinking caps on about how you might want to utilise the gates for certain customer flows.

One thing to note is that although these pre-configured settings will be loaded into the SCU, they aren't "set in stone," their use is optional and alterations to individual gates can still be made on the SCU, if there is a need to make a change.

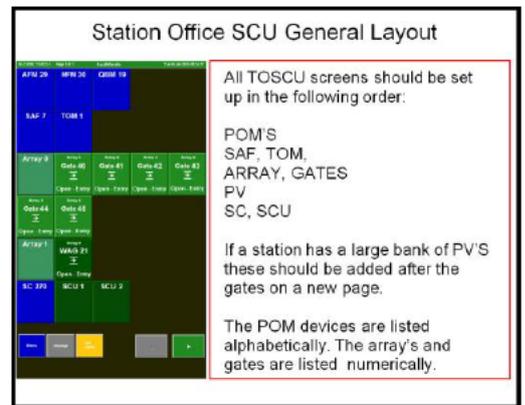
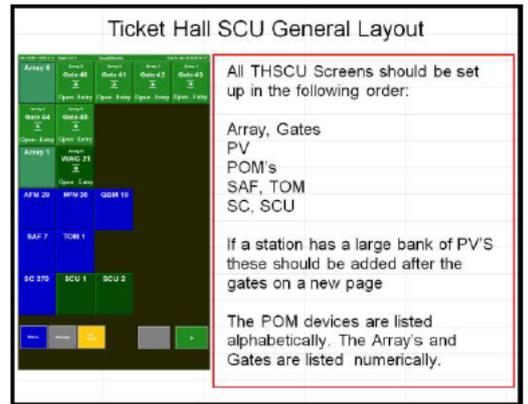


## SCU UPGRADE ...THE PREPARATIONS CONTINUE

In addition to preparing the SCU screen layouts and gateline configurations for the first batch of stations which are due to receive the new PC based SCU, the forthcoming SCU rollout has also offered the opportunity to rectify a number of previous errors with base data settings and how devices are configured at some of our stations.

As part of the preparations for the forthcoming rollout, we are also:

- Where possible renumbering WAGs so that they are numbered within the agreed numbering range, to ease identification and reporting
- Ensuring that WAGs are configured onto a separate Gate Array to the rest of the gates on the gateline that they are associated with, to allow Revenue Control blocks to be applied only to standard gates and allow controlled validation at the WAGs
- Renumbering of a number of gatelines where devices have been left in illogical configurations or with gates numbered outside of the agreed numbering ranges. Some early stations at which we have identified an opportunity to make changes in conjunction with the SCU installation are; Marble Arch, Bank (Central), Edgware Road (C&H) and Hounslow East.
- Correcting base data location descriptions for devices, to replace meaningless or incorrect location descriptions, again to improve the quality of data in commonly used reports and avoid confusion around where certain devices are actually located.
- Numbering all of the new SCUs at larger stations that have more than one Station Computer (SC) on the same NLC, to have unique device numbers e.g. 1,2,3 etc. to avoid possible confusion when reporting faults
- Adopting a common SCU numbering pattern, so if a station has a Control Room, that would be SCU01, with other SCUs (where appropriate) numbered SCU02 for POM Room and SCU03 etc. for gatelines.
- Reinstating/installing SCUs in Control Rooms at a number of locations which don't currently have this facility
- Rationalising SCU displays to only display the SCUs and devices in that particular ticket hall, but with Control Room SCUs showing all SCUs and devices connected to that particular SC. Unfortunately, we are not able to display devices connected to more than one SC on the same SCU terminal.



The initial installations will be at Ashfield House so that our training equipment there reflects the most up to date equipment being installed on our stations. Following this, installations of the new SCU will be planned on a largely geographical basis.

In TRU119 we will hopefully be able to update you on the planned SCU rollout and the timescales for this taking place.

## ANSWERS TO T&R TRIVIA

- |     |     |   |
|-----|-----|---|
| Q.1 | A   | 2010  |
| Q.2 | D   | Kings Cross – has 45 in total                     |
| Q.3 | C&D | Neither Dutch nor Russian are currently available |

Pt.4 **LAL MXIDE PU**

- (a) **BAKER STREET**      (b) **BARKINGSIDE**      (c) **BERMONDSEY**      (d) **BLACKHORSE ROAD**      (e) **BOSTON MANOR**

*Is there a connection? – They are all stations beginning with the letter "B".*

**How did you do?**



# CRIMEWATCH



## SKIMMING THREAT HASN'T GONE AWAY

[REDACTED]



SKIMMER CAMERA UNIT – FACE AND REVERSE VIEWS

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]



[REDACTED]

[REDACTED]

## LOOKING AHEAD TO TRU 119

The next edition of TRU is scheduled for publication towards the end of August and will include:

- *Preview of September Fares Revision changes*
- *Summary of major T&R Book changes in September*
- *Updates on the planned SCU rollout and other upgrades*
- *The first of our in-depth looks as T&R priority areas*
- *The latest T&R news stories*



...and the usual selection of letters, Trivia and other features.

### DID YOU KNOW?...

The number 119 is the sum of five consecutive prime numbers → (17 + 19 + 23 + 29 + 31).