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Title: Corrigendum to Version 2.1.4 of the ITSO Specification

Specification Part(s) affected by this note: TS 1000-2, 5 and 6 (Version 2.1.4)

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ITSO

Corrigendum 1 to Version 2.1.4

This Corrigendum notice identifies the corrections to the Parts as noted below:

Corrected Versions of the Specification may be identified by the indicator COR 1 which can be found on the title page under the ISBN Number. The last modified date in the footer of the front page will be 26th April 2010 (2010-04-26).

Reason for the Corrigendum:

It has been found during implementation testing of the new TYP 24 IPE that it has been defined in a way which contravenes other parts of the Specification and is therefore not consistent. This corrigendum provides the detail of the required corrections to the Specification. In the course of investigation of this issue a small number of other related details were noted and are also corrected by this corrigendum.

The main issue relates to the extension records defined in the Spec in Part 5, Clause 2.11.1.1, specifically in Table 136. The Value Record Data Group requires a record length of 15 bytes of data (17 bytes including the header elements). The Value Records in the TYP 24 IPE have been defined to be of variable length and much longer than that. In addition only one Value Record is defined whereas Part 2 states a requirement for at least 2 Value Records per Value Record Data Group.

To resolve this issue it is therefore necessary to make to following corrections to the Specification:

Part 2:

- Amend Part 2 to remove the restriction on the number of Value Records, thus allowing there to be only one Value Record per Value Record Data Group. Amend Clause 2.3.1.
- Correct the definition of VGXPadding in Clause 7.5.1.1 of Part 2.

Part 5:

- Amend the TYP 24 Definition for the Value Record Data Group (Clause 2.1.11.1).
- Add a new VGXRef (= 3) definition for the Value Group Extension to be used with IPE TYP = 24 into Clause 4.1.

Part 6:

- Amend embodiment forms to include padding (when required).

In more detail:

New or changed text is shown in blue. Text shown in italics is for location and instruction purposes only. Deletions where shown are in red with double strikethrough.

Part 2:

*In **Clause 2.3.1**, amend the following paragraph as follows:*

A Value Record Data Group shall contain at least ~~2~~ 1 Value Record~~s~~. The number of Value Records required for each IPE is defined in ITSO TS1000-5.

*In **Clause 7.5.1.1**, amend the following paragraph as follows:*

7.5.1.1 VGXLength

This Data Element is a 6 bit binary integer, the value of which shall be the length (inclusive of this element and any Value Group Extension padding elements) of the Value Group Extension ~~to the start of first Data Element of the Value Record InstanceID~~ in Blocks. A Block consists of BL bytes and must be of identical value to that defined for each IPEFormatRevision in ITSO TS 1000-5.

Part 5:

*In **Clause 2.11.1,** amend the third paragraph as follows:*

The total length of the IPE Data Group must not exceed 256 bytes (this is as a consequence of using a block size of 4).

*In **Clause 2.11.1.2,** amend the fourth paragraph as follows:*

The total length of the Value Record Data Group must not exceed 256 bytes (i.e. for a block size of 4).

The Value Record Data Group needs to be split into a Value Record of 15 bytes in length and a Value Group Extension (VGX) containing the remainder of the data elements required. (Note that this results in a reduction in the maximum number of reservation segments from 7 to 6.) Table 139 is therefore effectively split into two, one part remaining in Clause 2.11.1.2 and the remainder being now placed in the Clause reserved for Value Group Extensions. A new Clause 4.1.3 is defined for the Value Group Extension (VGXRef = 3).

*Replace **Table 139** with the following Table:*

Table 139 - TYP 24 Value Record Data Group

ITSO Name	Offset	Data Type	Size (bytes)	EN1545 Equivalent	Group	ITSO comment
VGLength	0	HEX	0.75	INTEGER	VH	Defined in ITSO TS 1000-2
VGBitMap	0.75	BMP	0.75	INTEGER	VH	Defined in ITSO TS 1000-2
VGFormatRevision	1.5	HEX	0.5	VersionNumber	VH	
TransactionType	2	HEX	0.5	EventTypeCode	V	Defined in ITSO TS 1000-2 Coded according to EN1545 EventTypeCode list. Note that a code of zero shall be used for the creation of an IPE which contains no value. Only codes in the range 0 to 15 are permissible, codes with values of 16 and greater shall not be used. This element may be used to record Ticket use, where code 2 shall be used to record use for an outbound leg of a return Ticket, and code 6 to indicate that either a single Ticket, or the return leg of a return Ticket, has been consumed.

ITSO Name	Offset	Data Type	Size (bytes)	EN1545 Equivalent	Group	ITSO comment
TransactionSequenceNumber	2.5	TS#	1.5		V	Defined in ITSO TS 1000-2
DateTimeStamp	4	DTS	3	DateTimeStamp	V	Defined in ITSO TS 1000-2
ISAMIDModifier	7	HEX	4	SerialNumberFour	V	Defined in ITSO TS 1000-2
ActionSequenceNumber	11	HEX	1		V	Defined in ITSO TS 1000-2
JourneysRemaining	12	HEX	1	CountOfCoupons	V	Count of the number of journeys that the ticket is still valid for and is reduced on exit at destination. Initially set to 2 for a return ticket and 1 for a single.
TransfersRemaining	13	BMP	1.375	INTEGER	V	Count of the total number of remaining transfers - reduced by the equipment of the service provider honouring the transfer entitlement. Up to 3 transfer types are permitted each with up to 511 transfers
JourneyPartUsedFlag	14.375	FLAG	0.125		V	Indicates that the current part of the product has been part used (e.g. an outward leg up to an out-of-station interchange) Set to 1 on exit at interchange and re-set to 0 when a journey is completed e.g. when the out portion is used
NumberOfReservations	14.5	HEX	0.5	INTEGER	V	Product structuring data: indicates the presence and number of the optional reservations data elements.
RFU	15	HEX	2	Hex	V	RFU
Padding		PAD	AR			Pad to a whole number of blocks with 0x00. Padding shall be provided once only for the Data Group comprising all value records within the Value Record Data Group. Padding shall be positioned at the end of the Data Group. Note this padding shall be placed after the end of the VGX Dataset and immediately before the InstanceID.

Note: AR = as required.

Note that the shaded area comprises the Dataset Header as defined in ITSO TS 1000-2.
Note that in the Group column, VH indicates an element in the Value Header, and V an element in the value record

Note 1: The length of these LOC1 data elements is 6 (six) for UK Rail applications.

Note 2: This Value Record Data Group requires a Value Group Extension to be present with VGXRef set to 3. See Clause 4.1.3.

*Add new **Clause 4.1.3** as follows:*

4.1.3 VGX Record Data Group for TYP 24 IPE Value Record Data Group – VGXRef = 3.

This Value Group Extension is for use with the TYP 24 IPE when the optional Value Record Data Group is used.

Table AD3 – TYP 24 VX Record Data Group – VGXRef =3

ITSO Name	Offset	Data Type	Size Bytes	EN1545 Equivalent	Group	Comment
VGXLength	0	HEX	0.75	INTEGER	VXH	The Value Group Extension length (in Blocks)
VGXRef(Bit9,Bit8)	0.75	BMP	0.25	INTEGER	VXH	Defined in ITSO TS 1000-2 **Both bits set to 0 for this VGX data group.**
VGXRef(Bit7-Bit0)	1	HEX	1	INTEGER	VXH	Defined in ITSO TS 1000-2 ***Set to 3 for this VGX data group***
DTSOfLastValidation	2	DTS	3	DateTimeStamp	V	DTS of last validation event. Maybe an on vehicle or the start of an interchange period.
LocationOfLastValidation	5	LOC1	Variable (17 max)		V	Location of last validation event. See note 1
BookingReference	11	ASCII	8	ReservationID	V	UD Booking Reference
			36			Count of bytes for the Value Group with no optional reservations.
LegDepartureDateTime	0	DTS	3	DateTimeStamp	VO	Date and time of reserved leg departure.
LegServiceId	3	ASCII	6		VO	UD Retail Service ID of the reserved leg.

ITSO Name	Offset	Data Type	Size Bytes	EN1545 Equivalent	Group	Comment
LegOrigin	9	LOC1	Variable (17 max)	Origin	VO	Location of Leg origin. See note 1
LegDestination	15	LOC1	Variable (17 max)	Destination	VO	Location of leg destination. See note 1
Coach	21	ASCII	2	VehicleID	VO	UD Coach ID.
SeatNumber	23	ASCII	3	SeatNumber	VO	RD Seat Number ID.
AccommodationAttribute	26	ASCII	4		VO	UD Accommodation Attribute
SeatDirection	30	BMP	0.25	SeatPositionCode	VO	Facing, Back or Airline - or null if not used
BerthUpperLower	30.25	BMP	0.25		VO	Indicates sleeper berth position: (binary) 00 = Not specified 01 = Lower 10 = Upper 11 = RFU
ReservationType	30.5	UD	0.5		VO	Seat/Berth/Bike/No-place/Wheelchair type code.
TogetherFlag	31	FLAG	0.125		VO	Indication as to whether sleeper cabin is shared.
RFU	31.125	RFU	0.875		VO	
			32			Count of bytes for each (optional) reservation
VGX_Padding		PAD	AR			Pad to a whole number of blocks for the Value Group Extension with 0x00. Padding shall be provided once at the end of the Value Group Extension(VGX) dataset.

Note: AR = as required.

Note 1: In the Group Column, VXH indicates an element in the Value Group Extension Header, VX an element in the value Group extension record, and VXO an Optional element (within the Optional Reservation).

Note 2: The length of the LOC1 data elements is 6 (six) for UK Rail applications.

Part 6:

The format of the 0207, IPE Creation Message needs slight amendment to include the data on the Value Group Extension (modified table 5.48f below renumbered as 5.48g and inclusion of new table 5.48f) and to amend the reference point from Value Group to Value Group Extension where applicable as shown below for Table 5.49e (to be renumbered 5.48e). Replace these tables with the following:

Table 5.~~49e~~ 48e - TYP 24 Value Group – RecordFormatRevision = 5

Name	Source	Format	Size	Comment
VGLength	V	HEX	1	A 0.75 byte value, occupying bits 0 to 5, bits 6 to 7 shall be set to 0.
VGBitMap	V	BMP	1	A 0.75 byte value, occupying bits 0 to 5, bits 6 to 7 shall be set to 0.
VGFormatRevision	V	HEX	1	A 0.5 byte value, occupying bits 0 to 3, bits 4 to 7 shall be set to 0.
TransactionType	V	HEX	1	A 0.5 byte value, occupying bits 0 to 3, bits 4 to 7 shall be set to 0.
TransactionSequenceNumber	V	TS#	2	A 1.5 byte value occupying bits 0-7 of the least significant byte and bits 0-3 of the most significant byte. Bits 4-7 of the most significant byte shall be set to 0.
DateTimeStamp	V	DTS	3	
ISAMIDModifier	V	HEX	4	
ActionSequenceNumber	V	HEX	1	
JourneysRemaining	V	HEX	1	
TransfersRemaining	V	BMP	2	A 1.375 byte value, occupying bits 0 to 10, bits 11 to 15 shall be set to 0.
JourneyPartUsedFlag	V	FLAG	1	A 0.125 byte value, occupying bits 0, bits 1 to 7 shall be set to 0.
NumberOfReservations	V	HEX	1	A 0.5 byte value, occupying bits 0 to 3, bits 4 to 7 shall be set to 0.
RFU	V	RFU	2	

Table 5.48f - TYP24 Value Group Extension – RecordFormatRevision = 5

VGXLength	VX	HEX	1	A 0.75 byte value, occupying bits 0 to 5, bits 6 to 7 shall be set to 0.
VGXRef (Bit9; Bit8)	VX	BMP	1	A 0.25 byte value, occupying bits 0 to 1, bits 2 to 7 shall be set to 0. This element shall be included in the message only if MessageBitMap/0 = 1.
VGXRef (Bit7 – Bit0)	VX	HEX	1	This element shall be included in the message only if MessageBitMap/0 = 1.
DTSOfLastValidation	VX	DTS	3	
LocationOfLastValidation	VX	LOC1	Variable Maximum 17	
BookingReference	VX	UD	8	

Table 5.~~48f~~ 48g - TYP 24Value Group VO Segment (included n times only if the value (n) of NumberOfReservations is not equal to 0) – RecordFormatRevision = 5

Name	Source	Format	Size	Comment
LegDepartureDateTime	VXO	DTS	3	
LegServiceId	VXO	UD	6	
LegOrigin	VXO	LOC1	Variable Maximum 17	
LegDestination	VXO	LOC1	Variable Maximum 17	
Coach	VXO	UD	2	
SeatNumber	VXO	UD	3	
AccommodationAttribute	VXO	UD	4	
SeatDirection	VXO	BMP	1	A 0.25 byte value, occupying bits 0 to 1, bits 2 to 7 shall be set to 0.
BerthUpperLower	VXO	BMP	1	A 0.25 byte value, occupying bits 0 to 1, bits 2 to 7 shall be set to 0.
ReservationType	VXO	UD	1	A 0.5 byte value, occupying bits 0 to 3, bits 4 to 7 shall be set to 0.
TogetherFlag	VXO	FLAG	1	A 0.125 byte value, occupying bits 0, bits 1 to 7 shall be set to 0.
RFU	VXO	RFU	1	

Amend Table 2.140 to include the Data Elements required for the Value Group Extension record. Note the entire table is shown below for clarity and ease of implementation:

Table 2.140 - IPE TYP 24, Format Version 2

LD	Information only					LD	LD	LD
Element Number	Target IPE Group	Target IPE ITSO Name	Target IPE Data Type	Included in target IPE?	Content generation rule	Rule Code	List Data Size	List Data
1	DIR	OID	EF + OID13	Dir Entry	set to value in embodiment spec	2	2	Value
2	DIR	TYP	TYP	Dir Entry	set to value in embodiment spec	2	1	24
3	DIR	PTYP	PTYP	Dir Entry	set to value in embodiment spec	2	1	Value
4	DIR	VGP	FLAG	Dir Entry	set to one (1) or set to zero (0) or determined upon IPE creation	3 or 4 or 1	0	-------
5	DIR	IINL	FLAG	Dir Entry	*set to value in embodiment spec or set to value determined upon IPE creation	1 or 2	0 or 1	Null or value
6	DIR	EXP (Expiry Date)	DATE	Dir Entry	set to value in embodiment spec or set to value determined upon creation or set to today's date plus the value in embodiment spec	1 or 2 or 5	0 or 2	Null or value
7	H	IPELength	HEX	Always	determined upon IPE creation	1	0	-------
8	H	IPEBitMap	BMP	Always	Set to value in embodiment spec or set to value determined upon IPE creation	1 or 2	0 or value	Null or value
9	H	ListFormatRevision + IPEFormatRevision	HEX	Always	set to value in embodiment spec	2	1	0x12
10	IPE	RemoveDate	RDATE	Always	set to value in embodiment spec	2	1	Value
11	IPE	ProductRetailer	OID16	Always	*set to value in embodiment spec or set to value determined upon IPE creation	1 or 2	0 or 2	Null or value
12	IPE	TYP24Flags	BMP	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
13	IPE	ProductTypeEncoding	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
14	IPE	TicketNumber	UD	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 4	Null or Value
15	IPE	NumberOfAssociatedIPEs	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value

16	IPE	NumberOfDiscounts	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
17	IPE	NumberOfSupplements	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
18	IPE	NumberOfTransferTypes	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
19	IPE	NumberOfInterchanges	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
20	IPE	NumberOfRestrictionTime Bands	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
21	IPE	NumberOfVehicleSpecific Restrictions	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
22	IPE	NumberOfRoutingPoints	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
23	IPE	Class	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
24	IPE	AutoRenewTime AfterExpiry	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
25	IPE	NumberOfJourneysSold	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
26	IPE	OutPortionPeriodOfValidity	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
27	IPE	RtnPortionPeriodOfValidity	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
28	IPE	OperatorSpecificity	UD	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
29	IPE	FaresTypeOfTicket	UD	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 3	Null or Value
30	IPE	PartySizeAdult	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
31	IPE	PartySizeChild	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
32	IPE	PartySizeConcession	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value

33	IPE	IdDocumentReference	UD	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 4	Null or Value
34	IPE	Origin	LOC1	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value
35	IPE	Destination	LOC1	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value
36	IPE	AlternativeOrigin	LOC1	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value
37	IPE	AlternativeDestination	LOC1	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value
38	IPE	Route	UD	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 5	Null or Value
39	IPE	OutPortionValidFrom	DTS	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 3	Null or Value
40	IPE	RtnPortionValidFrom	DTS	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 3	Null or Value
41	IPE	RestrictionCode	UD	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
42	IPE	DaysTravelPermitted	DOW	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
43	IPE	DaysRestrictionApplies	DOW	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
44	IPE	AmountPaidCurrencyCode	VALC	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
45	IPE	AmountPaidMOP	MOP	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
46	IPE	AmountPaid	VALI	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 4	Null or Value
47	IPE	VendorLoc	LOC1	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value

48	Associated-IPE	IPEInstanceID	HEX	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
49	Discounts	DiscountCode	UD	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 5	Null or Value
50	Discounts	DiscountAmount	VALI	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 4	Null or Value
51	Discounts	DiscountPercentage	HEX	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
52	Discounts	DiscountCodeType	UD	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
53	Discounts	RFU	RFU	according to bit map	Set to zero (0)	4	0	-------
54	Supplement	AssociatedSupplementCode	ASCII	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 3	Null or Value
55	Interchange	OutOfLocationInterchange Exit	LOC1	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value
56	Interchange	OutOfLocationInterchange Entry	LOC1	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value
57	Interchange	PermittedInterchangeTime	HEX	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
58	Interchange	RFU	RFU	according to bit map	Set to zero (0)	4	0	-------
59	Transfers	TransferEntitlementType	HEX	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value

60	Transfers	NumberOfTransfers	HEX	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
61	Transfers	RFU	RFU	according to bit map	Set to zero (0)	4	0	-------
62	Restriction 1	OperatorApplicability	UD	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
63	Restriction 1	SpecificLocationApplicability	LOC1	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value
64	Restriction 1	TimeBandOnOutOrReturn	BMP	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
65	Restriction 1	TimeBandStart	TIME	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
66	Restriction 1	TimeBandEnd	TIME	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
67	Restriction 1	TimeBandOnArriveOrDepart	FLAG	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
68	Restriction 1	TimeBandIncludeExclude Flag	FLAG	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
69	Restriction 1	RFU	RFU	according to bit map	Set to zero (0)	4	0	-------
70	Restriction 2	SpecificVehicleDepartureLocation	LOC1	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value
71	Restriction 2	SpecificServiceId	UD	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 6	Null or Value
72	Restriction 2	SpecificVehicleDeparture Time	TIME	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
73	Restriction 2	RestrictionOrEasementFlag	FLAG	According to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value

74	Restriction 2	RFU	RFU	According to bit map	Set to zero (0)	4	0	-------
75	Route	RoutingLocation	LOC1	According to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value
76	Route	ViaNotVia	UD	According to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
77	Route	RFU	RFU	According to bit map	Set to zero (0)	4	0	-------
78	Pax Detail	Name	UD	According to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 20	Null or Value
79	Pax Detail	Gender	BMP	According to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
80	Pax Detail	RFU	RFU	According to bit map	set to zero (0)	4	0	-------
81	IPE	Padding	PAD	if required	set to zero (0)	4	0	-------
82	IPE	IIN	IIN	if required	set to value in embodiment spec	2	3	Value
83	INS	KID	HEX	Always	determined upon IPE creation	1	0	-------
84	INS	INP#	HEX	Always	set to zero (0)	4	0	-------
85	INS	ISAMIDCreator	HEX	Always	determined upon IPE creation	1	0	-------
86	INS	ISAMS#	HEX	Always	determined upon IPE creation	1	0	-------
87	INS	SEAL	BIN	Always	determined upon IPE creation	1	0	-------
88	VH	VGLength	HEX	Always	determined upon IPE creation	1	0	-------
89	VH	VGBitMap	BMP	Always	Set to value in embodiment spec or determined upon IPE creation	1 or 2	0 or 1	Null or value
90	VH	VGFormatRevision	HEX	Always	set to value in embodiment spec	2	1	0x0A
91	V	TransactionType	HEX	Always	Set to value in embodiment spec, or set to value determined upon IPE creation, or set to zero (0)	1 or 2 or 4	0 or 1	Null or value
92	V	TransactionSequence Number	TS#	Always	Set to value in embodiment spec, or set to value determined upon IPE creation, or set to zero (0)	1 or 2 or 4	0 or 2	Null or value
93	V	DateTimeStamp	DTS	Always	determined upon IPE creation	1	0	-------
94	V	ISAMIDModifier	HEX	Always	determined upon IPE creation	1	0	-------
95	V	ActionSequence Number	HEX	Always	set to zero (0)	4	0	-------
96	V	JourneysRemaining	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value

97	V	TransfersRemaining	BMP	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
98	V	JourneyPartUsedFlag	FLAG	Always	set to zero (0)	4	0	-------
99	V	NumberOfReservations	HEX	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
100	V	RFU	RFU	Always	set to zero (0)	4	0	-----
101	VXH	VGXLength	HEX	Always	determined upon IPE creation	1	0	-----
102	VXH	VGXRef (Bit9; Bit8)	BMP	Always	set to value in embodiment spec or set to value determined upon creation	1 or 2	0 or 1	Value
103	VXH	VGXRef (Bit7 – Bit0)	HEX	Always	set to value in embodiment spec or set to value determined upon creation	1 or 2	0 or 1	Value
104	VX	DTSOfLastValidation	DTS	Always	set to zero (0)	4	0	-------
~~10~~ ~~1~~105	VX	LocationOfLastValidation	LOC1	Always	set to zero (0)	4	0	-------
~~10~~ ~~2~~106	VX	BookingReference	ASCII	Always	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 8	Null or Value
~~10~~ ~~3~~107	VXO	LegDepartureDateTime	DTS	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 3	Null or Value
~~10~~ ~~4~~108	VXO	LegServiceId	ASCII	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 6	Null or Value
~~10~~ ~~5~~109	VXO	LegOrigin	LOC1	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value
~~10~~ ~~6~~110	VXO	LegDestination	LOC1	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or variable 17 max	Null or Value
~~10~~ ~~7~~111	VXO	Coach	ASCII	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 2	Null or Value
~~10~~ ~~8~~112	VXO	SeatNumber	ASCII	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 3	Null or Value
~~10~~ ~~9~~113	VXO	AccommodationAttribute	ASCII	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 4	Null or Value

11 01 14	VX O	SeatDirection	BMP	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
11 11 15	VX O	BerthUpperLower	BMP	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
11 21 16	VX O	ReservationType	UD	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
11 31 17	VX O	TogetherFlag	FLAG	according to bit map	set to value in embodiment spec determined upon IPE creation	1 or 2	0 or 1	Null or Value
11 41 18	VX O	RFU	RFU	according to bit map	set to zero (0)	4	0	-------
11 9	VX	VGX_Padding	PAD	If Required	set to zero (0)	4	0	-------
12 0	V	Padding	PAD	If Required	set to zero (0)	4	0	-------
11 51 21	INS	KID	HEX	Always	determined upon IPE creation	1	0	-------
11 61 22	INS	INP#	HEX	Always	set to zero (0)	4	0	-------
11 71 23	INS	ISAMIDCreator	HEX	Always	determined upon IPE creation	1	0	-------
11 81 24	INS	ISAMS#	HEX	Always	determined upon IPE creation	1	0	-------
11 91 25	INS	SEAL	BIN	Always	determined upon IPE creation	1	0	-------

During the course of investigating the changes required for the correct implementation of TYP 24 detailed above if was noted that there were a number of inconsistencies in the treatment of the new VGX datasets, when they were implemented into the Specification. As a consequence the following corrections are required to the text:

Part 5

*Amend **Table AD1** and **Table AD2** to add the VGX_Padding element as the last element of each table (this is described in Part 2 as a requirement for all VGX datasets, and is therefore making explicit the requirement to add padding if necessary):*

VGX_Padding		PAD	AR			Pad to a whole number of blocks for the Value Group Extension with 0x00. Padding shall be provided once at the end of the Value Group Extension(VGX) dataset.

Part 6

The embodiment Tables for TYP 2, 4 and 5 do not include the Value Group Extension Padding elements.

*Amend **Table 3.131** to include a row for VGX_Padding immediately before the Padding element, as new element number 93, and increment all the following element numbers by one.*

93	VX	VGX_Padding	PAD	If Required	set to zero (0)	4	0	-------
~~93~~94	V	Padding	PAD	If Required	set to zero (0)	4	0	-------
~~94~~95	INS	KID	HEX	Always	determined upon IPE creation	1	0	-------
~~95~~96	INS	INP#	HEX	Always	set to zero (0)	4	0	-------
Etc	*Rows*	*Omitted*	*for*	*Brevity*				

*Amend **Table 3.133** to include a row for VGX_Padding immediately before the Padding element, as new element number 91, and increment all the following element numbers by one*

91	VX	VGX_Padding	PAD	If Required	set to zero (0)	4	0	-------
~~91~~92	V	Padding	PAD	If Required	set to zero (0)	4	0	-------
~~92~~93	INS	KID	HEX	Always	determined upon IPE creation	1	0	-------
~~93~~94	INS	INP#	HEX	Always	set to zero (0)	4	0	-------
Etc	*Rows*	*Omitted*	*for*	*Brevity*				

*Amend **Table 3.134** to include a row for VGX_Padding immediately before the Padding element, as new element number 95, and increment all the following element numbers by one:*

95	VX	VGX_Padding	PAD	If Required	set to zero (0)	4	0	-------
~~95~~96	V	Padding	PAD	If Required	set to zero (0)	4	0	-------
~~96~~97	INS	KID	HEX	Always	determined upon IPE creation	1	0	-------
~~97~~98	INS	INP#	HEX	Always	set to zero (0)	4	0	-------
Etc	*Rows*	*Omitted*	*for*	*Brevity*				

~ End of Corrigendum ~