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Title: Certification of Off-line Bus ETM POST Equipment

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Certification of Off-line Bus ETM Equipment

This paper relates specifically to the Minimum Requirements for the Certification of Off-line Bus ETM Equipment for Full Certification.

Off-line Bus ETM equipment shall be considered fully compliant, with respect to the Operating License and the Certification Process, if it meets or exceeds the following requirements outlined below.

1. Off-line Bus ETM equipment shall be capable of recognising and processing ITS0 Shells loaded onto all the Customer Media Platforms defined in Part 10.
2. Off-line Bus ETM equipment shall not be required to be able to create or delete ITS0 shells, except where the POST is being used as a personalisation POST.
3. Off-line Bus ETM equipment shall be capable of recognising and identifying all IPEs from their directory entry.
4. Off-line Bus ETM equipment shall be capable of recognising the following IPEs and where appropriate processing usage by amending the IPE, as required by the Specification:
 - a. STR IPE TYP=2
 - b. All Ticket IPEs (22 to 29) except:
 - i. TYP=24 (Rail) need not be implemented
 - ii. TYP=26 (Road Tolling) need not be implemented.
 - c. All ID and Entitlement IPEs (TYP=14 and TYP=16).
 - d. All Loyalty IPEs (TYP=3 and TYP=17)
 - e. All CTA IPEs (TYP=4 and TYP=5)
 - f. All other IPEs shall be recognised but do not need to be processed.
5. Additionally Off-line Bus ETM equipment, performing the ITS0 Operating License function of Product Retailing, shall be capable of creating, and where appropriate deleting, the following IPEs:
 - a. All Ticket IPEs (22 to 29) except:
 - i. TYP=24 (Rail) need not be implemented
 - ii. TYP=26 (Road Tolling) need not be implemented.
 - b. All Loyalty IPEs (TYP=3 and TYP=17)
 - c. CTA (TYP=4 and TYP=5) by Action List only
6. For the avoidance of doubt Off-line Bus ETM equipment shall be capable of recognising all other IPEs, but shall not be required to be capable of processing (i.e. create, update and delete) such IPEs, as required by the Specification
7. For the avoidance of doubt Off-line Bus ETM equipment shall be capable of recognising and processing Action Lists and Hot Lists as required by the ITS0 Specification.
8. For the avoidance of doubt Off-line Bus ETM equipment shall be capable of correctly processing and utilising the Log and generating Transient Tickets according to the requirements of the ITS0 Specification.



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9. Off-line Bus ETM equipment shall not be required to be capable of generating and sending back office query messages.
10. Off-line Bus ETM equipment, performing the ITSO Operating License function of Product Retailing, shall be capable of recognising and processing the Auto Top Up requirements of existing IPEs, but shall not be required to process the [initial] setting up of Auto Top Up functions.
11. Off-line Bus ETM equipment, performing the ITSO Operating License function of Product Retailing, shall be capable of recognising and processing the Auto Renew requirements of existing IPEs. Off-line Bus ETM equipment shall not be required to process the [initial] setting up of Auto Renew functions.
12. In the case of Interoperability Lists, Off-line Bus ETM equipment shall not be required to meet the requirements of the specification, if it can be shown that suitable alternative arrangements exist for the integration of Operator Specific configuration data provided from or available in a HOPS at the time of submission for certification; and that Licensed Operators to whom equipment is likely to be delivered have signified their assent to the alternative arrangements, in writing. (Note a certificate shall not be issued by ITSO unless and until ITSO is satisfied that the relevant assents have been attained.
13. Off-line Bus ETM equipment shall be compliant with all other requirements of the version of the Specification current at the time of submission for Certification.
14. Off-line Bus ETM equipment shall be considered suitable for certification if it transacts the benchmark transactions as described in the Specification (Part 10) as follows:
 - a. For each CMD that meets or exceeds the target requirements (i.e. the transaction time is less than or equal to the target time for the CMD) in the Specification that CMD shall be certificated with no endorsement.
 - b. For each CMD that fails to meet the target requirements but by less than a factor of **two** times the target transaction time (i.e. the transaction time fails to meet the requirements in (a) above but is less than **two** times the target time for that CMD) in the Specification shall be granted a certificate but that certificate will be endorsed with the transaction times.
 - c. For the avoidance of doubt, equipment that fails to meet the target requirements by more than a factor of **two** times the benchmark transaction timing targets in the Specification for any CMD shall not be granted a certificate.

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