Appendix to **IRS 90940**

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Original

Data exchange with Driver Advisory Systems (DAS) following the SFERA protocol

Appendix H

Error codes in SFERA

This appendix:

- is updated regularly,
- corresponds to the above date of update.

INTERNATIONAL UNION OF RAILWAYS

Appendix H - Error Codes in SFERA

Code	Condition	Reason
2	SFERA XSD version not supported	The syntax SFERA XSD version is not supported by the recipient.
7	Intended recipient not actual recipient	The actual recipient of the message is different from the intended recipient.
12	Invalid value	The value of a data element or attribute does not conform to the relevant specifications for the value.
13	XML Schema Violation	The XML schema has not been respected.
18	Unspecified error	An error has been identified, but the nature of the error is not specified.
21	Invalid character(s)	One or more characters used in the XML are not recognised by the recipient.
23	Unknown interchange sender	The sender is unknown.
26	Duplicate detected	A possible duplication of previously received messages has been detected.
46	Action not authorised for user	The user was not allowed to make the request.
48	Data temporarily unavailable	Data requested not currently available; try later.
49	Data unavailable	Data requested unavailable.
50	Could not process data	The received data could not be processed.
51	Requested data not available	In case of JP, SP, TC: data is requested that does not exist.
52	Insufficient Information	The information is insufficient to correctly process the message.
53	Inconsistent data	The data received is inconsistent.
54	Version mismatch	The version received does not match the version requested.
55	Data mismatch	The data received does not correspond to the data requested.

1.1 Examples of Error Codes

Code	Example
2	The received message is using a major version in the header of the message that is not supported by the recipient: for example, the SFERA_version sent is 3.2 and the recipient only supports messages with SFERA_version 2.x. Major versions can have different mandatory elements in the schema.
7	The recipient of the message has a different company ID or device ID than indicated in the header of the message (in Recipient or destinationDevice).
12	The XML schema does not always protect against absurd values in an element. This error is used to indicate that the value in a certain element cannot be a correct value; for example a gradient (gradientValue) of 100 mm/m or a curve radius (curveRadius) of 10m are allowed by the XSD, but are impossible in practice.
13	The received XML message is not compliant with the schema (as indicated in the header of the message).
18	This error code should only be used when no other error codes can be applied. It only indicates the location in the message that is causing the error.
21	This error is similar to Error 12, but used in case the information is given via standardised text. The XSD only requires a string, but the content of the string cannot be understood by the recipient. For example, if the message contains a string in Cyrillic and the recipient cannot parse it.
23	The sender of the message has a company ID or device ID (in the message header, Sender or sourceDevice) that is not listed as trusted companies and devices by the receiver.
26	The message uses an already used message_ID.
46	The on-board device requests SPs or TCs not related to their trainIdentification or to their relevant JP.
48	When DAS-OB requests a JP, for example in advance of a trip, the data may not be ready; DAS-TS can then reply with this message to suggest to try again later. Other examples may be when the on-board device requests information that is indicated as ‘under revision’ (e.g. a newer version of an SP that is still under construction) or when ground requests location and speed and the GPS information has not been updated during the last 15 seconds.
49	The on-board device requests information that is not available. Obviously this can indicate inconsistencies in the database of the party that has to reply with this error message. Note that Error 51 should be used when unknown JP, SP or TC are requested.
50	This error code can be used to indicate the receiver was not able to process a certain message, e.g. handling C-DAS-C advice received from DAS-TS when DAS-OB is not able to do so.

Code	Example
51	Similar to Error 49, but intended to be used when data is requested for an unknown JP, SP or TC.
52	Some information needed to be able to process the message is missing. The element itself was optional, but in reality conditional. This means the element is needed under certain conditions. For example, an area (e.g. a Tunnel) where startEndQualifier is marked as StartsEnds (i.e. the tunnel starts and ends inside the SP), but no startLocation is provided.
53	This error can be used when a value is correct according to the schema and even possible, but not at that moment. If the train includes an absurd location in the Status Report, this error code can be used. If an area (e.g. a Platform) has a higher startLocation value than endLocation.
54	SPs and TCs have major and minor versions (SP_VersionMajor and SP_VersionMinor). When an SP of a certain version is requested and an SP of a different version is provided, this error can be used.
55	When the device on the train requests TCs and the reply message contains SPs, there is obviously such a mismatch.