Playout Operational Updates Phase 1: Technical Faults

ADWANTED UK, VERSION 1.0

Version control

Version	Date	Updated by	Change
1.0	17/09/2025	Adwanted UK (Susie Campbell)	First published specification.
0.7	07/05/2025	Adwanted UK (Susie Campbell)	Allow NULL for optional boolean flag input and new section on possible validation to be applied
0.6	01/05/2025	Adwanted UK (Susie Campbell)	Updates around optional enddate, 2 records, optional nonplay indicator
0.5	27/03/2025	Adwanted UK (Susie Campbell)	Clarification of output and reporting time
0.4	25/03/2025	Adwanted UK (Susie Campbell)	Additional assumptions (3) technical issues data will not be ingested if > 14 days old (4) data will not be available immediately to buyside, but released daily (5) No overlapping validation for faults required (6) cost dashboards will not include this data
0.3	16/01/2025	Adwanted UK (Susie Campbell)	Assumptions (1) technical faults will always be reported at frame (not play) level (2) new database table to hold faults rather than a flag against existing plays
0.2	06/11/2024	Adwanted UK (Susie Campbell)	Update following opening discussions
0.1	23/10/2024	Adwanted UK (Susie Campbell)	Initial version.

Operational Updates/Enhancements could be classified as any of the following:

(1) A reported screen technical fault after a play has been recorded, requiring row review
(2) Optional fields not available at first submit of data, but become available later
(3) Correction of incorrect data

In scope

(1) A reported screen technical fault after a play has been recorded, requiring row review

Out of scope

(2) Optional fields not available at first submit of data, but become available later
(3) Correction of incorrect data

(1) TECHNICAL FAULTS

Purpose/Aim

To allow reporting of known technical screen issues to provide accountability and transparency on Playout of OOH in use.

File specification

1. Files must be in CSV format.
2. For each Media Owner, their filenames must be unique. The file naming convention is up to each Media Owner to decide.
3. The files must be UTF-8 encoded.
4. There is no header record. The first record begins on the first line. No empty lines are permitted and there is no provision for 'comments' within the file.
5. Each record (including the final record in the file) must be terminated with a Unix-style line termination (LF 0x0A).
6. Each record must have a fixed number of fields, as defined later in this document. Optional fields can be left empty or else must adhere to the defined field format.
7. Each field of type "TEXT" may optionally be delimited by double-quotes (0x22) -- necessary if the value includes a comma. When delimited like this and a double-quote exists within the value of the text, the double-quote must be escaped with an additional double-quote. For example: "some text ""in quotes"" more text"
8. Each field must not include space padding at the beginning or end.

Protocol

Media Owners may upload two records to Playout: one to report a fault has been validated and occurring (an ‘open’ record), and a further one when the fault is fixed (a ‘closed’ record), to provide an ‘enddate’. Both records are identified by the same ‘mediaownerfaultref’.

The Playout fault database will keep both records in the database (one without ‘enddate’, one with) so there is an audit trail of the data supply. Data will be validated between the first and the second record. Media Owners will be able to improve data quality with rules as follows:

- Mandatory fields supplied in the ‘open’ record can be amended in the ‘closed’.
- Optional fields not populated in the ‘open’ record, but populated in the ‘down’ record, will be accepted.
- Once a record with an ‘enddate’ has been submitted, it cannot be amended.

Media Owners may also submit a single record with a unique ‘mediaownerfaultref’ to Playout containing both a ‘startdate’ and an ‘enddate’ once a fault is fixed.

N.B. An ‘open' record will be a row, a ‘closed’ record will be a further row and both will be exported via S3. There is also the possibility that just a 'fixed' record is received/reported.

Record definition

Faults are to be reported at a frame level.

Field	Type	Format	Description
***frameid**	INT4	SPACE Frame ID	The Frame ID held in SPACE.
***startdate**	TIMESTAMP	*yyyy-mm-dd*T*hh:mm:ss.sss*	The UTC start time of the fault.
***startutcoffset**	TZ_OFFSET	±*hh:mm* Z	Time zone offset for the fault start time (e.g. +01:00 for BST; Z or :00:00 can be used for GMT.)
enddate	TIMESTAMP	*yyyy-mm-dd*T*hh:mm:ss.sss*	The UTC end time of the fault.
endutcoffset	TZ_OFFSET	±*hh:mm* Z	Time zone offset for the fault end time. (e.g. +01:00 for BST; Z or :00:00 can be used for GMT.)
reason	TEXT	Max length 256 characters.	Freetext description of the issue
mo_nonplay_indicator	BOOLEAN	1 for yes / 0 for no or NULL	MO decision to discount related plays
***mediaownerfaultref**	TEXT	Max length 48 characters	Media Owner-defined reference representing this record. For the Media Owner, this should uniquely identify this record across all time. (Note that records supplied by other Media Owners may happen to use the same ID however.)

There will be no overlapping validation for faults, and no 14-day rule.

Record augmentation

As with other file ingests, Playout will record the SPACE Media Owner ID against each ingested file. It will be determined from the S3 folder into which the file is dropped.

The date/time of ingesting a record (inserttime), and an ID unique to each file processed (jobid) will be included in the data stored in the data warehouse.

Reporting

The buyer IDs for each row of data in the fault data will be collected (using the frame id and date(s) to query the Playout data to collate the buyer IDs on the affected days) and stored temporarily. If a fault is ongoing (no enddate), a daily job will repeat this process for the last 24 hours. The fault data will also be stored separately temporarily. Once a day, a job will join this data and put it into Redshift so it can be queried and exported to the relevant buyers' S3 buckets.

Considering this, it is important that faults are closed.

Reported faults will be held separately to the main Playout data.

Separate S3 exports will be generated, with the following schema:

Field	Column type
inserttime	timestamp without time zone
jobid	character(32)
frameid	integer
startdate	timestamp without time zone
startutcoffset	character varying(6)
enddate	timestamp without time zone
endutcoffset	character varying(6)
reason	character(256)
mo_nonplay_indicator	boolean
mediaownerfaultref	character varying(48)

Validation

Some validation checks will be applied prior to writing to the database and appropriately reported. Validation checks could be as follows (some new, some like existing and some shared with Classic/Digital):

Error	Error code	Description
errorFieldCount	100	The record has more or less fields than the expected number of fields
errorMissingMandatoryField	101	Mandatory fields must not be blank. Refer to the specs for information on mandatory fields.
errorMissingMandatoryMediaOwnerFaultRef		MediaOwnerPlayoutRef field must not be blank. Refer to the spec for information on mandatory fields.
errorInvalidMediaOwnerFaultRefFormat		Must have a maximum length of 48 characters.
errorMediaOwnerFaultRefNotUnique		Must be unique
errorInvalidFrameIdFormat	110	Must be an integer between 1000000000 and 2147483647
errorInvalidDateTimeFormat	130	Must be formatted as: **yyyy-mm-ddThh:mm:ss.sss**
errorInvalidTimezoneFormat	131	Must be formatted as: **±hh:mm** or **Z**
errorDateTimeIsInFuture	132	startdate and enddate must not be in the future
errorFaultEndIsBeforeFaultStart		enddate of a fault must not be before the startdate of the same fault
errorPlayoutUnexpectedDataChanged		CLOSED record differs from OPEN record, (for columns that can be improved, i.e. from blank to a value)
errorPlayoutDataIllegalDataChanged		CLOSED record differs from OPEN record, (for columns that cannot be improved)
errorFrameNotInSpace	300	Frame ID must exist in the SPACE database

errorFrameClosed	302	Frame is listed as 'out of charge' in SPACE at time of play
errorFrameNotOwnedByMediaOwner	303	Frame is recognised in SPACE as being owned by a different Media Owner to the one listed in this record at the time of play
warningOpenFaultForFrame		When a new fault with a unique Media Owner Fault Ref is recorded, but we have an existing OPEN record but no CLOSED
warningNoValidPlaysForReportedPeriod		Fault recorded but unable to be reported to buyside as no corresponding buyers available to lookup
errorPlayoutFatalError	500	Some exceptional processing error has occurred

Appendix

User Stories

AS A MO
I WANT TO report a fault as soon as I am aware of it, which may be before it is fixed
SO THAT Playout is as up to date as my knowledge
AND the buyside aware of issues asap

AS A MO
I WANT TO close a fault I've opened on Playout
SO THAT Playout is as up to date as my knowledge
AND the buyside aware of the status quo

AS A Playout Admin
I WANT the fault database to be an accurate reflection of opened and resolved faults
SO THAT Playout remains a trusted, accurate and transparent platform

AS A Buyer
I WANT to know if my inventory was reported as played on a screen with a fault
SO THAT I can have a discussion with the MO