



Emersion Inbound SIR (CSV) Format

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1. Document Change History

Version	Date	Description	Author
0.1	19/02/2014	First Draft	Martin Edge
0.2	26/02/2014	Ready for release	Martin Edge
0.3	03/03/2014	Added filename spec	Martin Edge
0.4	12/03/2014	Modified filename spec and clarified CSV	Martin Edge

2. Introduction

2.1 Purpose

The purpose of this document is provide documentation on guidance on how to construct and present Emersion Inbound SIR Files. (CSV Format)

2.2 Scope

The scope of this document is to cover all detail for each record type within the Emersion Inbound SIR Format, which will enable Emersion clients to create systems and processes that create files for easy input into the Emersion Ecosystem.

It is imperative that all data lengths, data types and mandatory behaviours are taken into account when creating records. Not following these rules will result in your file being rejected and professional services fees will most likely be involved in attempting to clean-up any dirty data created by the process.

2.3 Audience

The intended audience of this document includes (but not limited to):

- Emersion CEO;
- Emersion Business Analysts and Project Managers; and
- Emersion Software Engineers.
- Clients

3. SIR Inbound Introduction

Emersion has created a specific inbound (CSV) format to manage the input of most record types required for telephony and data billing.

The record types supported by this feed is;

- **Telephony**

Telephony records can be imported and can specify direction, terminated numbers, start and end times and optionally can have a tariff pre-set. If no tariff (key) is assigned on input, the system will use its own database and will interrogate the source and destination numbers to ascertain a valid key.

- **Misc**

Misc records cover anything that is service and equipment related, or ad-hoc. This feed is only currently used for one time records. There is no current method in place to initiate recurring, as it is expected the creator of the SIR/CDR will be managing this on their end.

- **Data**

Data records cover products which are 100% data – such as DSL / NBN / Fibre connections. The columns within this format are also more suited to data implementations than telephony.

4. File Format Details

The below section will go through each record type within the Emersion Inbound SIR. Note: header and footer is mandatory, and any other record type is optional.

NOTE: All records are to be CSV (Comma separated values) with text qualifier of double quotes (“). The field lengths defined in the specification below only reference the maximum allowable length.

4.1 File Header

The file header describes aggregate information such as sequence number and the date the file was created.

Column Name	Type	Nullable?	Description
Record Type	String (32)	NO	Always HDR
Sequence	Long (11)	NO	The file sequence. Ensures all files are processed in order.
File Created	Timestamp	NO	The date the file was created, in the format yyyy-mm-dd hh24:mi:ss

4.2 File Footer

The file footer describes further aggregate information, in this case the total record count for reconciliation purposes.

Column Name	Type	Nullable?	Description
Record Type	String (32)	NO	Always FTR
Record Count	Long (11)	NO	Total records excluding the header and footer

4.3 Usage Telephony Record

The Telephony record is designed for any traditional CDR (Call Detail Record) generated by PABXs, PSTN Networks or VOIP Providers.

Column Name	Type	Null?	Description
Record Type	String(32)	NO	Always UT
Tariff Key	String (128)	YES	The call type used for billing against a tariff. If missing the system will automatically detect based on the FNN destination if outbound, if inbound it's set to inbound
FNN Charged	String (32)	NO	The charged party for the call – Emersion will look up the service id based on this. This needs to be consistent with the Service Type.
FNN Source	String (32)	YES	The source of the call
FNN Destination	String (32)	YES	The destination of the call
FNN Terminated	String (32)	YES	The final destination of the call after any internal routing
Date Started	Timestamp	NO	The time the call started
Date Ended	Timestamp	YES	The time the call ended. If this is missing, the duration will be used to figure it out.
Duration	Long (11)	NO	The duration of the call in seconds
Carrier Charge	Double (17,7)	YES	Carrier cost for the call. Useful in situations where mark-ups might be used Ex Tax. Tax type is set on the tariff.
Origin Description	String (256)	YES	A description for the call origin
Destination Desc	String (256)	YES	A description for the call destination
Description	String (512)	YES	A general description for the call
Reference Id	String (128)	YES	A unique reference for the call (note uniqueness will NOT be validated).
Direction Id	Int (1)	YES	The direction of the call. 1 is outbound, 0 is inbound.
Provider Id	String (32)	YES	Unique ID for the source provider. For client use.
Provider Name	String (64)	YES	Provider name relevant to supplier. For client use.
Network Type	String (32)	YES	The network type relevant to the call. For client use.
Withdraw	Int(1)	YES	Whether the record is a reversal of a previous one

Please note: Use of withdraw will match based on negative carrier charge, negative duration, same date started, same service charged and same destination.

4.4 Usage Misc Record

The Misc record is designed for any service and equipment fees, such as voicemail, call direction or for one time charges like technical support or call out fees. This is a NON RECURRING call record.

Column Name	Type	Nullable?	Description
Record Type	String(32)	NO	Always UM
Tariff Key	String (128)	NO	This is the identifier key which maps against a product key in Emersion for rebilling. Contact Emersion for your given product to find out what options have been setup for your service type.
Charge Key	String (32)	NO	The charged party for the call – Emersion will look up the service id based on this
Date Started	Timestamp	NO	The time the call started
Date Ended	Timestamp	YES	The time the call ended. If this is missing, the duration will be used to figure it out.
Units	Long (11)	NO	The duration of the call.
Carrier Charge	Double (17,7)	YES	Carrier cost for the call. Useful in situations where mark-ups might be used.
Description	String (512)	YES	A general description for the record
Reference Id	String (128)	YES	A unique reference for the record (note uniqueness will NOT be validated)
Transaction Date	Timestamp	YES	The date of the transaction. Can be blank, will be replaced with current processing date if so.
Billing Flag	Int (1)	NO	For reference, whether the record is considered an advance or arrears charge. 1 is advance, 2 is arrears.

4.5 Usage Data Record

The Data record is designed for any data based service such as Dialup, DSL, Wireless broadband, NBN etc. This data can be used within a data plan to go towards usage caps

Column Name	Type	Nullable?	Description
Record Type	String(32)	NO	Always UD
Tariff Key	String (128)	YES	The data billing key to be used to identify traffic type. If blank the system will use the configuration under the respective service plan on how it should be ascertained. Contact Emersion for your given product to see what is available, generally 'peak' or 'offpeak' are used.
Service Charged	String (32)	NO	The charged party for the data record. Emersion will use this when looking up the service to bill
Date Started	Timestamp	NO	The time the session started
Date Ended	Timestamp	YES	The time the session ended
Session Id	String (32)	YES	The duration of the call.
Session Length	Long (11)	NO	Length of the session in seconds
Upload Data	Long (12)	NO	Total traffic uploaded from the client (in bytes)
Download Data	Long (12)	NO	Total tariff download to the client (in bytes)
Reference Id	String (128)	YES	A unique reference for the record (note uniqueness will NOT be validated)
IP Address	String (40)	YES	The IP address if available for the given session.

4.6 Filename Convention

The filename to be used to integrate with Emersion's standard format is decided per implementation. Each provider will be granted a 6 letter prefix for the file, which should be in the format:

CUSTOM_ZZZZZZ_YYYYMMDD_HHMMSS.CDR (in lower case)

- CUSTOM – six digit alphanumeric prefix to be allocated by Emersion.
- YYYY – Four digit year
- MM – Two digit month
- DD – Two digit day
- ZZZZZZ – six digit, zero padded sequence number
- HH – two digit hour
- MM – two digit minute
- SS – two digit second

NOTE: All records are to be CSV (Comma separated values) with text qualifier of double quotes (“”).