

RelaySMS

SMSWithoutBorders

Payload Specifications

Afkanerd

Version 1

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Definitions

CONTENT-EMAIL	This is intended for payloads that fit the standard emailing format; including emailing itself. Usually platforms that require SUBJECT.
CONTENT-MESSAGING	This is intended for payloads that fit the standard messaging format. Examples of this would be messaging apps such as Signal and Telegram. These are usually characterized by having just a TO and BODY.
CONTENT-TEXT	These are intended for payloads that fit the standard broadcasting formats. This is typical for social media publications where no TO and SUBJECT are required; just a body to be broadcasted; for example Bluesky.
TOKEN-ID	This refers to the ID of an entity recognized by both the serializer and the deserialization infrastructure; could be client/server architecture. The usage of TOKEN-ID would refer to what that entity is.
KEY-ID	This refers to the ID of the encryption key used in encrypting the CONTENT that gets published.
SESSION-ID	This is intended for tracking payload across multiple publications. Payloads with transports that require splitting and no guarantee of delivering in the order they are sent would require this for reassembly.
SEGMENT-NUM	This is intended for knowing the order in which a payload should be reassembled for a given SESSION-ID.
PAYLOAD	This is the combination of CONTENT and other meta data required to carry TOKEN-ID, KEY-ID, SESSION-ID, SEGMENT-NUM. It would usually be serialized depending on the transport intended for transmission.

Instructions

Bit level processing

The bits should be processed from least significant bit to the most significant bit (little-endian).

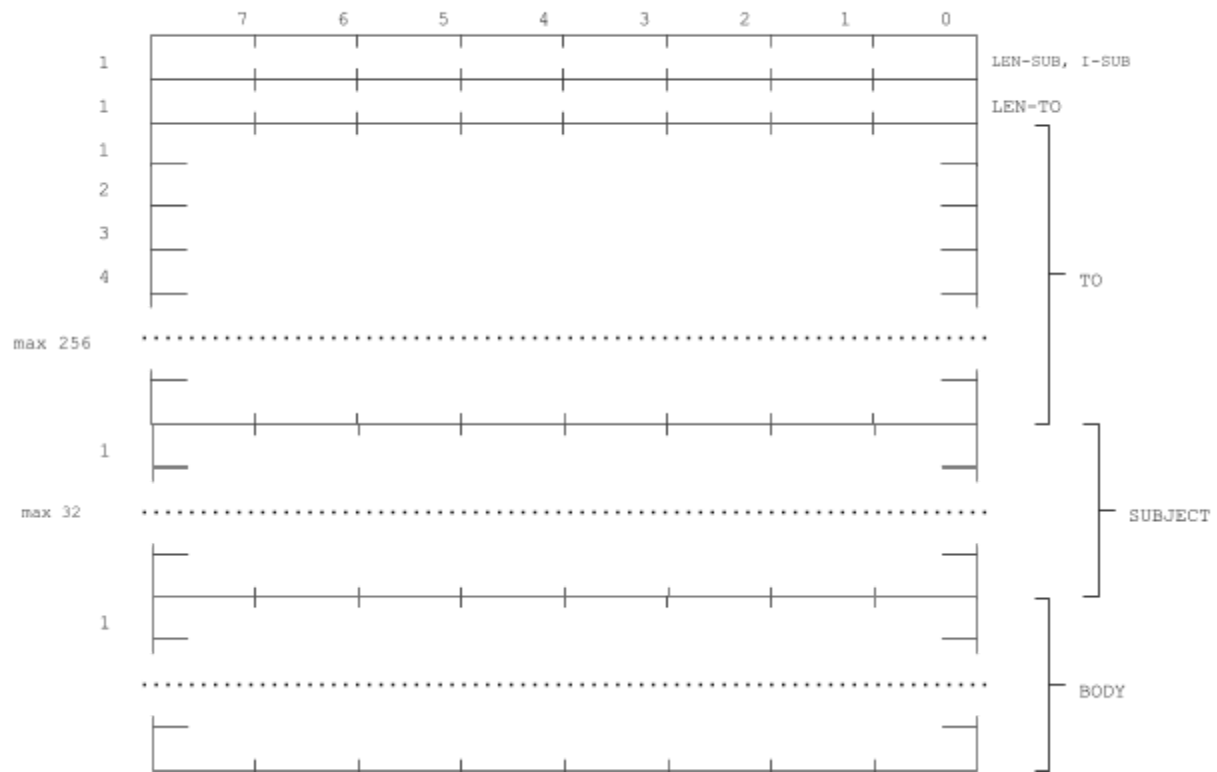
CONTENTS

Abbr.	Reference	P ¹⁾	R ²⁾	Description
I-SUB	IND-SUBJECT	M	b	Set to 1 to indicate a SUBJECT is present. Set to 0 to indicate no SUBJECT is present.
LEN-SUB	Length-Subject	O	7b	Length of SUBJECT. Required if I-SUB is set to 1. Value range 1 - 128
LEN-TO	Length-To	M	7b	Length of TO Value range 1 - 128
-	TO	M	4o-128o	Represents the address where the content would be targeted for publishing.
-	SUBJECT	O	o-128o	Subject of the content for platforms which support this (e.g emailing). Only present when I-SUB is set to 1
-	BODY	M	-	Body of content.

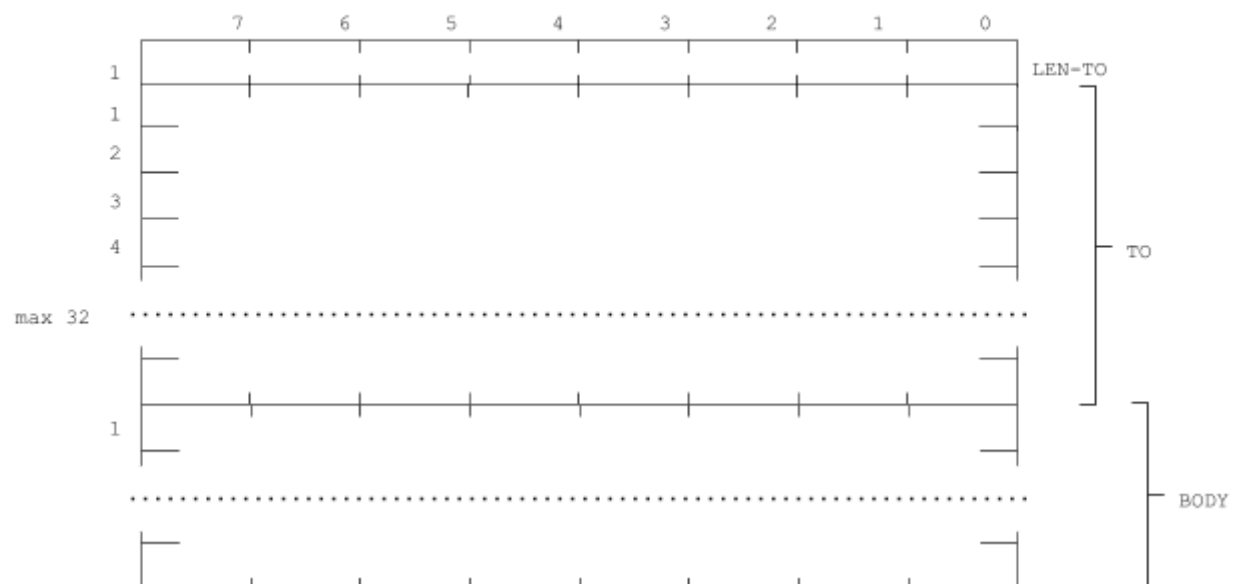
1) Provision: Mandatory (M) or Optional (O)

2) Representation: Integer (I), bit (b), 4 bits (4b), 4 - 32 Octets (4o-32o), 1 - 560 Octets (o-560o)

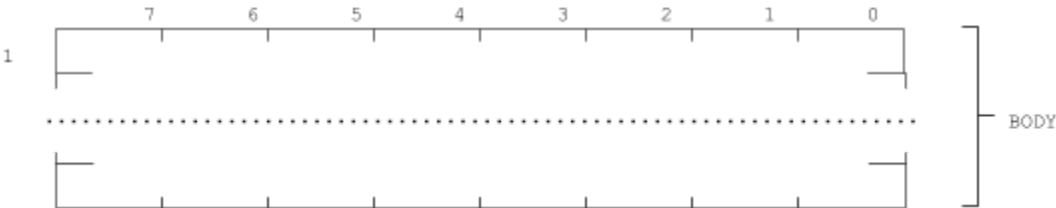
Layout of CONTENT-EMAIL:



Layout of CONTENT-MESSAGING:



Layout of CONTENT-TEXT:



PAYLOAD

Abbr.	Reference	P ¹⁾	R ²⁾	Description
VER	VERSION	M	3b	References the specifications version being used. Set to 1 for these specifications. Size range 0 - 7.
I-TID	IND-TOKEN-ID	M	b	Set to 1 to indicate a TOKEN-ID is present. Set to 0 to indicate a TOKEN-ID is not present.
I-ATT	IND-ATTACHMENT	M	b	Set to 1 to indicate an ATTACHMENT is present. Set to 0 to indicate an ATTACHMENT is not present.
SESS-ID	SESSION-ID	O	7b	Set to indicate the value of the ongoing session. Value range 0 - 127.
SEG-NUM	SEGMENT-NUMBER	O	u8	Represents the current segment in a session; indicated by SESSION-ID. Value range 0 - 255.

I-L	IND-LAST-SEGMENT	M	b	Set to 1 to indicate Segment is the final segment for that session. Set to 0 to indicate Segment is not the final segment for that session.
K-ID	KEY-ID	M	4-8b	Set to indicate the index value for which encryption key has been used. Can be set to 0 if transmission does not rely on communicating key information.
T-ID	TOKEN-ID	M	o-32o	Represents the targeted token for this session. Size range 0 - 4294967296
LEN-ATT	LENGTH-ATTACHMENT	O	u16	Represents the total attachment length across all segments once reassembled. Should be present when I-ATT is set to 1. Size range 1 - 65536 Note: This value should be modified and enforced depending on what transport would be used.
-	CONTENTS	O	-	Represents a serialized version of CONTENTS.

1) Provision: Mandatory (M) or Optional (O)

2) Representation: bit (b), 2 bits (2b), 4 bits (4b), 7 bits (6b), 64 Octets (64o), Unsigned 8-bits integer (u8), Unsigned 16-bits integer (u16)

Layout of PAYLOAD: I-ATT = 0

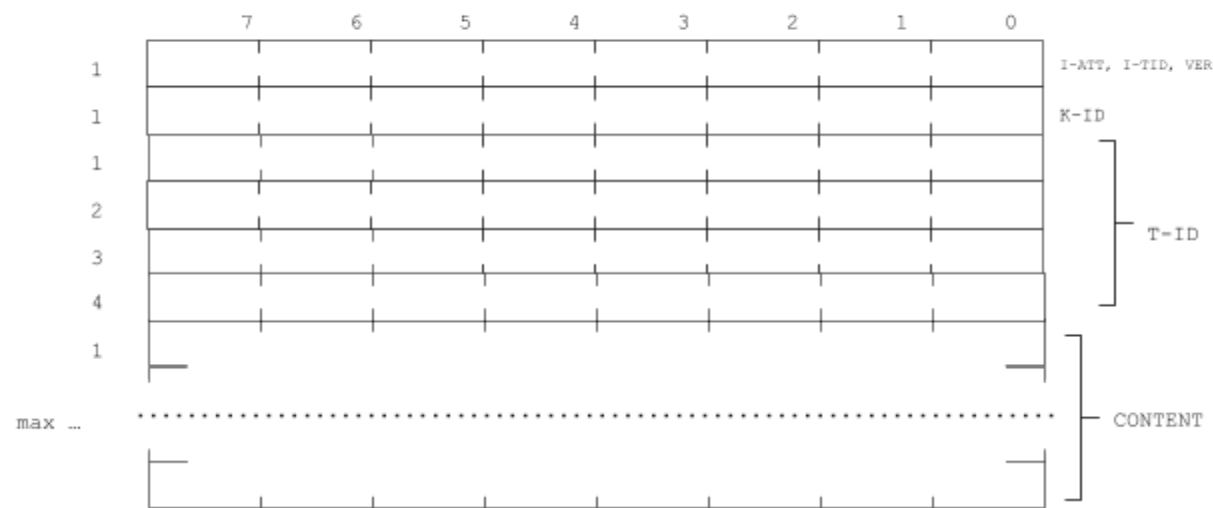


Fig. 3 - Payload publication format

Layout of PAYLOAD: I-ATT = 1 && SEG-NUM = 0

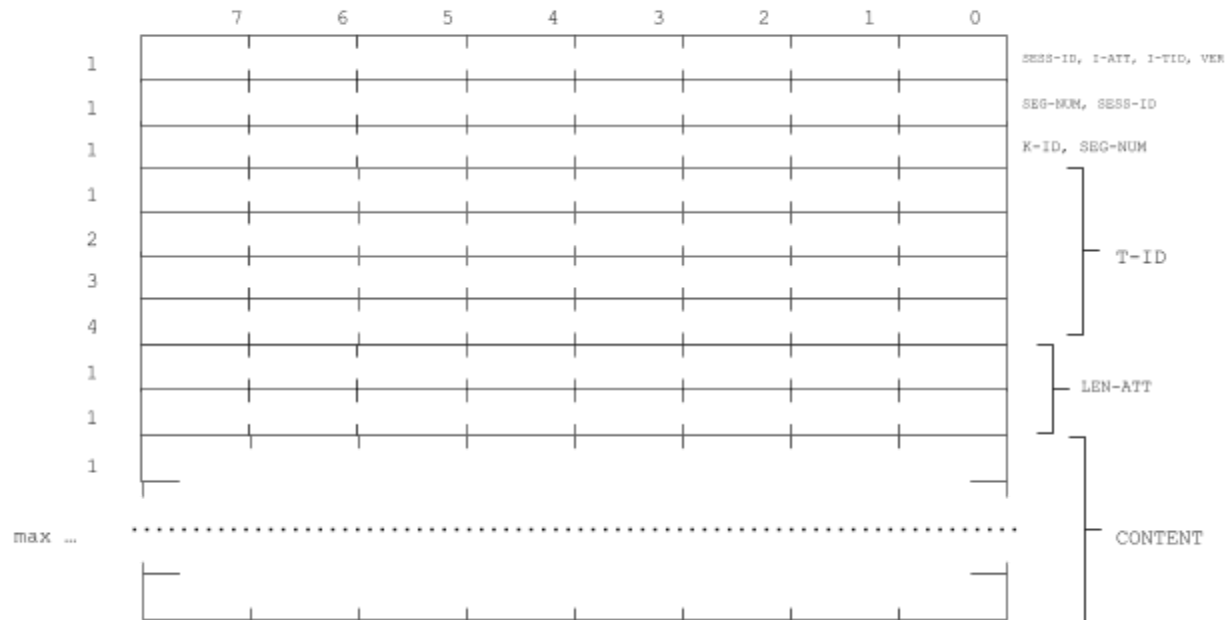


Fig. 3 - Payload publication format

Layout of PAYLOAD: SEG-NUM > 0

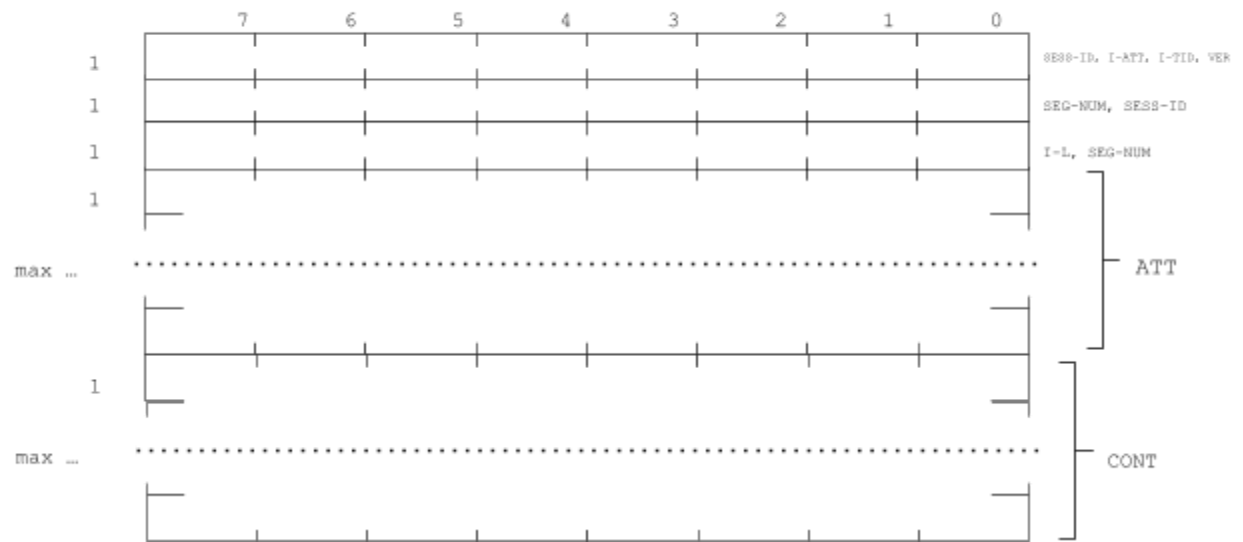


Fig. 3 - Payload publication format

Implementations

- Afkanerd - SMSWithoutBorders

- Rusty-Specs

https://github.com/smswithoutborders/rusty_relaysms_payload_specs