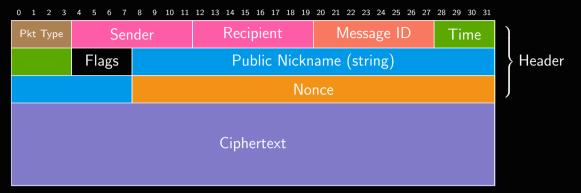
Message Packet (Threema Protocol Layer)



• Only the MSB of Flags is used

Message Packet on the Wire

O 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Length

Threema Client-to-Server Ciphertext

Text Message

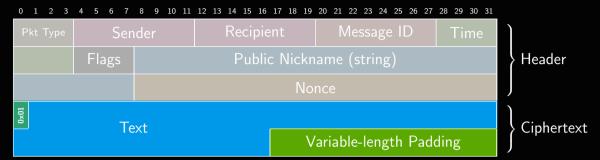
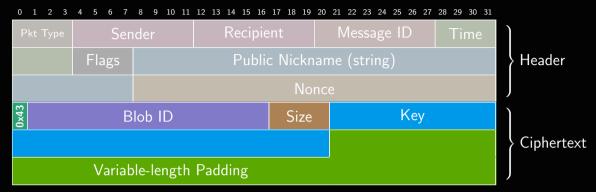
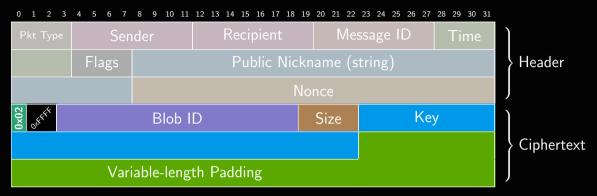


Image Message

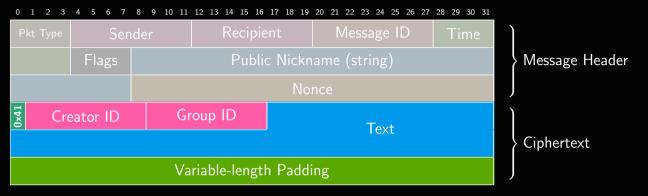


- Blob is symmetrically encrypted using Key and uploaded to asset server.
- Image captions are stored inside the image's EXIF data. These data leak upon creating such an image while the "save media to gallery" option is enabled.

Audio Message



Group Message Packet



Group Image Message



Group Picture Update

0 1 2 3	4 5 6 7	8 9 10 11	12 13 14 15 16 17 18 19	20 21 22 23 24 25 26	27 28 29 30 31	_
Pkt Type	Ser	ıder	Recipient	Message ID	Time	
	Flags		Public Nickn	ame (string)		Messa
			Nor	nce		J
08	roup ID		Blob ID	Si	ze	
		S	ymmetric key			
		Va	ariable-length Paddi	ng		

Message Header

Create/Update Group (members)

0 1 2 3	4 5 6 7	8 9 10 11	12 13 14 15 16 17 18 19	20 21 22 23 24 25 26 27	28 29 30 31	
Pkt Type	Sen	ıder	Recipient	Message ID	Time	
	Flags		Public Nickn	ame (string)		Message Header
			No	nce		J
<mark>7</mark> Gr	oup ID		Group Members			

Acknowledgement Packet to Server

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Length	Pkt Type	Sender	Message ID
		← Length	\longrightarrow