

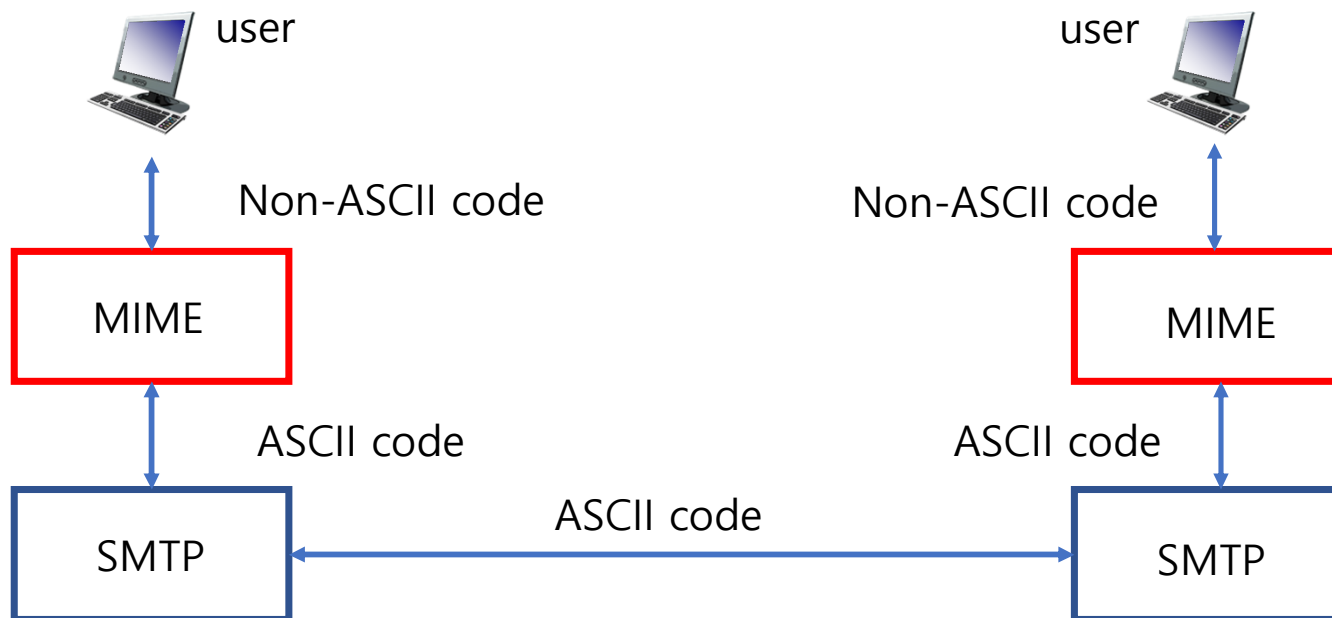
SMTP의 보완, 확장

MIME이라는 블록에 ASCII code로

변환(중)

MIME (Multipurpose Internet Mail Extension)

: a supplementary protocol that allows non-ASCII code to be sent through SMTP (extension to SMTP)

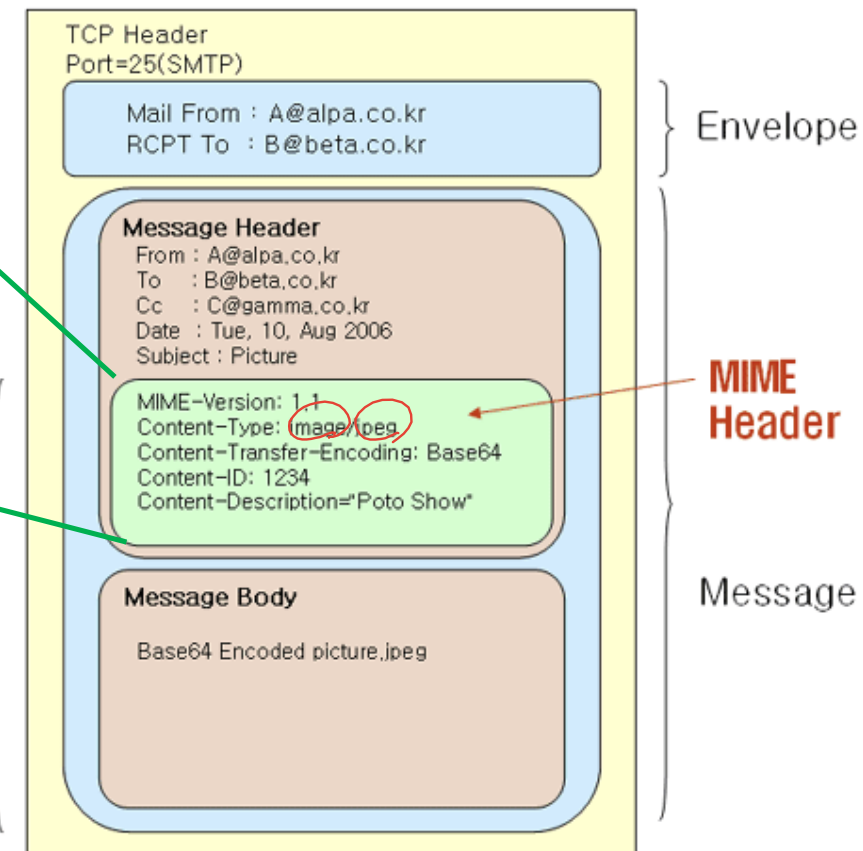


MIME header

chapter-2-56 이미지
덧붙여서 보낸 확장문

- MIME-Version: 1.1
- Content-Type: type/subtype
- Content-Transfer-Encoding: encoding type
- Content-Id: message id
- Content-Description: textual explanation of non-textual contents

MIME
Entity

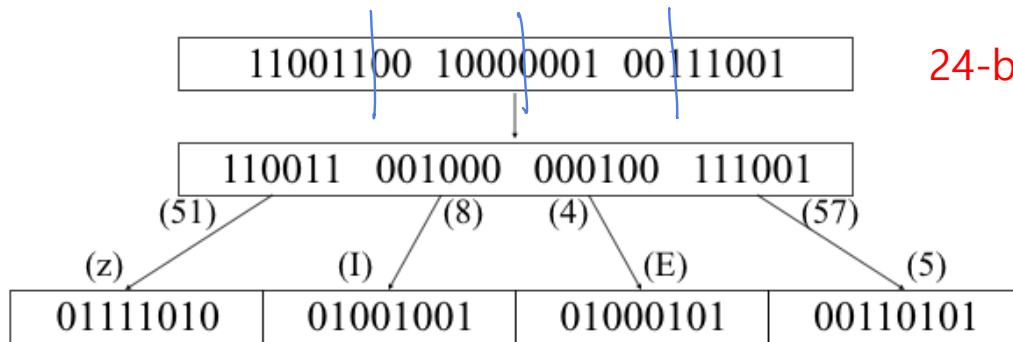


Content-Type: type/subtype

메인타입(주타입)	설명	서브타입(부타입)
text	텍스트를 표현.	text/plain, text/html, text/css, text/javascript, ...
image	이미지를 표현.	image/gif, image/png, image/jpeg, image/bmp, ...
video	동영상을 표현.	video/mp4, video/ogg, video/mpeg4-generic, ...
application	모든 종류의 이진 데이터를 표현.	application/octet-stream, application/vnd.ms-powerpoint, application/xml, application/pdf, application/json, ...
multipart	여러가지 타입의 데이터들을 동시에 전송할 때 사용.	multipart/form-data, multipart/byteranges, ...

Content-Transfer-Encoding: Base64

Example)



24-bit non-ASCII data

4 X 6-bit data

ASCII coded data

Base64 table

주어문자 X

Base64 색인표							
값	문자	값	문자	값	문자	값	문자
0	A	16	Q	32	g	48	w
1	B	17	R	33	h	49	x
2	C	18	S	34	i	50	y
3	D	19	T	35	j	51	z
4	E	20	U	36	k	52	0
5	F	21	V	37	l	53	1
6	G	22	W	38	m	54	2
7	H	23	X	39	n	55	3
8	I	24	Y	40	o	56	4
9	J	25	Z	41	p	57	5
10	K	26	a	42	q	58	6
11	L	27	b	43	r	59	7
12	M	28	c	44	s	60	8
13	N	29	d	45	t	61	9
14	O	30	e	46	u	62	+
15	P	31	f	47	v	63	/

ASCII code table

				상위비트									
					b7	0	0	0	0	1	1	1	1
					b6	0	0	1	1	0	0	1	1
하위비트				b5	0	1	0	1	0	1	0	1	
b4	b3	b2	b1	행	열	0	1	2	3	4	5	6	7
0	0	0	0	0	NUL	DLE	SP	0	@	P			p
0	0	0	1	1	SOH	DC1	!	1	A	Q	a		q
0	0	1	0	2	STX	DC2	"	2	B	R	b		r
0	0	1	1	3	ETX	DC3	#	3	C	S	c		s
0	1	0	0	4	EOT	DC4	\$	4	D	T	d		t
0	1	0	1	5	ENQ	NAK	%	5	E	U	e		u
0	1	1	0	6	ACK	SYN	&	6	F	V	f		v
0	1	1	1	7	BEL	ETB	'	7	G	W	g		w
1	0	0	0	8	BS	CAN	(	8	H	X	h		x
1	0	0	1	9	HT	EM	)	9	I	Y	i		y
1	0	1	0	A	LF	SUB	*	:	J	Z	j		z
1	0	1	1	B	VT	ESC	+	:	K	[	k		{
1	1	0	0	C	FF	FS	,	<	L	\	l		|
1	1	0	1	D	CR	GS	-	=	M	]	m		}
1	1	1	0	E	SO	RS	.	>	N	^	n		~
1	1	1	1	F	SI	US	/	?	O	-	o		DEL

z 0111010
8비트를 만듦.

Base64 table

Base64 색인표							
값	문자	값	문자	값	문자	값	문자
0	A	16	Q	32	g	48	w
1	B	17	R	33	h	49	x
2	C	18	S	34	i	50	y
3	D	19	T	35	j	51	z
4	E	20	U	36	k	52	0
5	F	21	V	37	l	53	1
6	G	22	W	38	m	54	2
7	H	23	X	39	n	55	3
8	I	24	Y	40	o	56	4
9	J	25	Z	41	p	57	5
10	K	26	a	42	q	58	6
11	L	27	b	43	r	59	7
12	M	28	c	44	s	60	8
13	N	29	d	45	t	61	9
14	O	30	e	46	u	62	+
15	P	31	f	47	v	63	/