

mp3

*

, , , , , , * , * , *

Development of High-Quality Audio Conference Tool Using Public mp3 Codec *

Taewan You, Kyoungae Kim, Jeongkeun Lee, Sooyeon Kim, Youngseok Lee, Yanghee Choi,
Jaehoon Jeong*, Seungyun Lee*, Youngjin Kim*

School of Computer Science and Engineering, Seoul National University

*Electronics and Telecommunications Research Institute

32 IPv4 128 가 IPv6
IPv6 6BONE
IPv6 가 mp3
(Mpeg-1 Audio Layer 3) (Codec)
native IPv6
, IPv6

1. (interactive)

IPv4 (Internet Protocol version 4) 32 IPv6

128 IPv6 mp3
(Internet Protocol version 6)가 , mp3

가 IPv6 , 2 IPv6
IPv6 가

[1].
IPv6가 가 mp3

3

가

3.1, 3.2

4

2.2

IPv6

2.2.1

가

5

PC

rawPCM

wav

3.1

가

mp3

2.

2.1

2.2.2 RTP Receiver

IPv6

GUI

, RTP (Realtime

(Graphical User Interface)

Transport Protocol) UDP (User Datagram Protocol)

2000

가

RTP

, Microsoft Visual C++

IPv6

Receiver

2.2.3

mp3

- lame

MP3

Lame (*Lame Ain't an Mp3 Encoder*)

mp3

, mp3

[3]. Lame

Lame

mp3, pcm

(

, VBR (Variable Bitrate), CBR (Constant

Bitrate))

mp3

Lame

3.7

Lame 3.51

1

UI (User Interface) IPv6

lame

가 가

가

Traffic

가

wav

mp3

RTP

가

mp3

RTP

가

UI

2.2.4

mp3

- mpg123

(Mike)

Mp3

mpg123 mp3

, wav

mp3

wav

[4]. Mpg123

RTP

Receiver

RTP

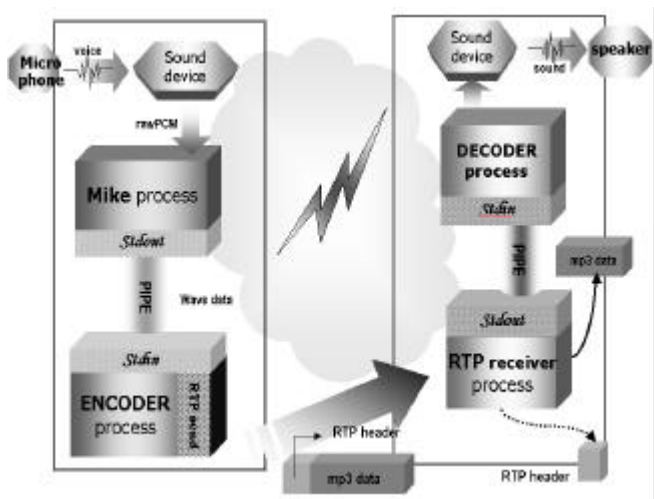
HTTP (Hypertext

mp3

mp3

Transfer Protocol)

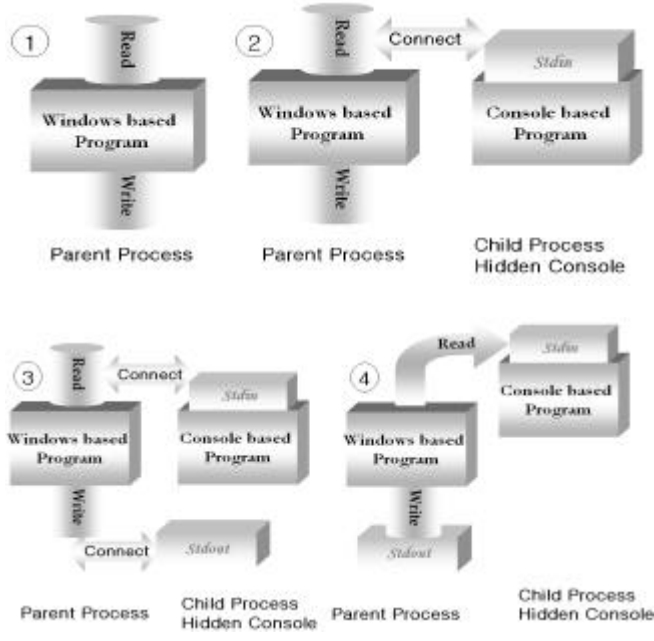
Mpg123 가 , wav 가 , wav , lame
 가 , wav , wav 가 가
 , CDR
 mpg123 가 가
 mp3



2000 (NT)
 , lame win32 2000 ,
 NT Win32 가
 2000
 win32
 가
 wav mp3
 Pipe
 가
 Microsoft SDK (Software Development Kit)
 가

[5].

3.
 3.1 - mp3
 wav mp3
 (speaker)
 (audience) 가
 가
 mp3 lame
 . Lame
 wav mp3
 가 Lame
 wave , wav
 가



3
 3

ms

1

		50~60
		50~60
		30~40
()	(RTP rcv)	20~30
		20~80
		440~490
		210

2000 (Win32) (

2000)

Win32

/

, Win32

5.

(ETRI) -

가

881~882ms 가

가 가

200~300ms

가

[6],

가

3.2 RTP

- MP3

Mpg123

. RTP Receiver mp3

Win32

가

RTP Receiver mp3 가

. RTP Receiver

, mp3

win32

(Hidden Mode)

4.

IPv6

가

1

[1] IPv6 Forum Korea, “ 2000-02”, <http://www.ipv6.or.kr>

[2] M. McCandless, “The MP3 revolution.” IEEE Intelligent Systems Volume: 14 Issue: 3 , May-June 1999

[3] The Lame Project, <http://www.mp3dev.org/mp3>

[4] The Mpg123 Project, <http://www.mpg123.org>

[5] Microsoft msdn library, <http://msdn.microsoft.com/library>

[6] Noll, P. “High quality audio for multimedia key technologies and MPEG standards ” Conference, 1999. GLOBECOM '99 , Volume: 4 , 1999