High Quality Video Broadcast System for Next Generation Internet

Kazunori Sugiura(CRL) Motonori Nakamura(Kyoto Univ.) Akihiko Machizawa(CRL)_ Takahiro Kikuchi(RCAC,TDI) Naoto Morishima(NAIST) Shin-ichi Nakagawa(CRL)

With cooperation of: WIDE Project

Characteristics of Internet

- best effort basis network
- Network Characteristics...
 - Jitter
 - Network Packet losses
 - Congestion Control
 - affects Stream media(Stream packet)

Current Internet Video Broadcasting System

- Limitation in Network Bandwidth
- Massive compression of Video and Audio data
- Realtime Teleconferencing System
 - High cost equipment

Requirements(Request)

- High Quality Picture
 - NTSC Quality Video
- High Quality Sound
 - CD Quality Audio
- Delayless transfer
- low cost solution
- Mid range bandwidth(10Mbps and higher)

Required Network Bandwidth is expanding



Development of Network Bandwidth

- Use of Mid-High speed network becomes realistic
- appearance of high-speed networks
 - ATM
 - WDM
- High Speed LANs
 - 100BaseT, Gigabit Ethernet

Internet Live Broadcasting System



Internet Live Broad and Multi-cast System



Keyboard

DV Video recorder

RealServer

Real Client NTSC PAL SECAM RGB Scan Converter

Main Power Supply



Rack 1

Rack 2

Wireless Mic. Audio Selector Video Input Monitor, Antenna DV Video Recorder Video Selector

Main Power Supply

Internet Connection from KRP(19990727)





