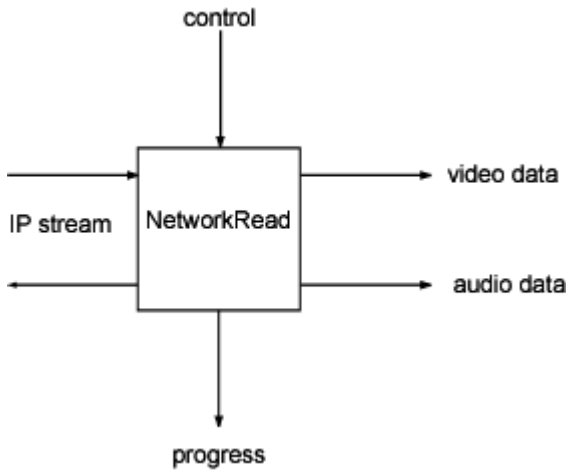**NetworkRead is a TSSA compliant software library that sets up and maintains a video-on-demand session over an IP network for streaming MPEG-4 content.**

NetworkRead

Description

The NetworkRead component takes in an IP stream on one or several socket connections. In case audio and video data are interleaved with the session control data, all are transferred over one TCP connection. Otherwise session control data is exchanged over a TCP connection, while audio and video data are streamed over separate UDP connections (two UDP connections per media; one for RTP data and one for RTCP data).

Audio and video data are demultiplexed by NetworkRead and redirected to TSSA queues, for delivery to the respective decoders.

Features

- This component is DVP-compatible.

- The NetworkRead component is ISMA level 1 profile 0 and 1 compliant.

- The NetworkRead component demultiplexes MPEG-4 video (ISO/IEC 14496-2) and MPEG-4 (ISO/IEC 14496-3) CELP and AAC audio.

- The NetworkRead component supports session control using RTSP (RFC2326).

- The NetworkRead component support audio/video reception over RTP (RFC1880).

- The NetworkRead component supports jump, pause and resume functionality.

- The Networkread component offers audio/video streaming over TCP and UDP.

- The Networkread component supports simple traversal of UDP through network address translators.

Documentation

Detailed documentation of the NetworkRead component is available.

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Technical Information

Memory Usage (excluding TCP/UDP stack)

Static Memory	179.198kBytes
Text Memory	1907592 bytes

Dynamic Memory	
• Object instantiation & internal buffers	170000 bytes
• RTP video buffer	(bufferSize + 0.6)*bitrate/8 * 1.5 (bufferSize in seconds, bitrate in bit/sec)
• RTP audio buffer	(bufferSize + 0.6)*bitrate/8 * 1.5

Example 1: 1.5 Mbit/sec MPEG-4 stream over TCP, 5 seconds buffer.

The dynamic memory budget equals:

Object instantiation:	170000 bytes
RTP buffers:	1575000 bytes
Total:	**1745000 bytes**

Processor Load (excluding TCP/IP stack)

Stream	Load (in MCycles)
1.3 Mbit/sec video stream, 96 Kbit/sec audio MPEG-4 stream	24.7 MC (UDP)

Operating System Usage

Tasks (NETW, BUFM,T000,T001,T002)	5
Semaphores	12
Queues	0
Mutex	17

Other Information

Supported Processors	pnx1300
Version Number	2.5
Build with Compiler Version	TCS 2.2

Related TriMedia TSSA Software Components
VdecMpeg4, AdecAac4, AdecCelp4

Example Programs
This library is shipped with an example program, exolMpeg4, which demonstrates the use of this component

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