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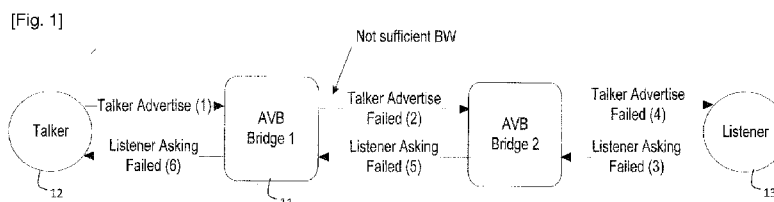
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(54) Title: ENHANCED STREAM RESERVATION PROTOCOL FOR AUDIO VIDEO NETWORKS



(57) Abstract: An enhanced stream reservation protocol comprising a Talker device sending a Stream Reservation Protocol (SRP) Talker Advertise message for streaming data to a Listener device, receiving the Talker Advertise message and checking bandwidth availability on an output port thereof for the streaming. In case of insufficient communication bandwidth, sending a failure message that includes information about available bandwidth from the Talker device to the Listener device. A protocol for communication in a bridged network, comprising a Talker device sending an SRP Talker Advertise message for streaming data to a Listener device. The Talker Advertise message includes communication path information from the Talker device to the Listener device. A communication path from the Talker device to the Listener device is selected based on said path metrics, for streaming data between the Talker device and the Listener device.



AMENDED CLAIMS
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AMENDED CLAIMS

- [Claim 1] (No change) A method of communication in a bridged network, comprising:
a Talker device sending a Stream Reservation Protocol (SRP)
Talker Advertise message for streaming data to a Listener device;
receiving the Talker Advertise message and checking bandwidth
availability on an output port thereof for the streaming; and
in case of insufficient communication bandwidth, sending a failure
message that includes information about available bandwidth from
the Talker device to the Listener device.
- [Claim 2] (No change) The method of claim 1, wherein:
receiving the Talker Advertise message comprises an intermediate
bridge device receiving the Talker Advertise message, checking
bandwidth availability on an output port thereof for the streaming,
and sending a Talker Advertise Failed message with a modified
traffic specification to indicate said information about available
bandwidth.
- [Claim 3] (No change) The method of claim 2, further comprising the Listener device
receiving said Talker Advertise Failed message indicating the
minimum available bandwidth from the Talker device to the
Listener device.
- [Claim 4] (No change) The method of claim 3, further comprising selecting a path from the
Talker device to the Listener device based on said information
about available bandwidth.
- [Claim 5] (No change) The method of claim 2 further comprising:
a bridge receiving said Talker Advertise Failed message and
forwarding the message out towards the Listener device; and
the Listener device responding with a Listener Asking Failed
message that is forwarded back towards the Talker device.
- [Claim 6] (No change) The method of claim 3, further comprising:
the Listener device informing the Talker device at a Layer-2 about
said available bandwidth.
- [Claim 7] (No change) The method of claim 3, further comprising:
the Listener device informing the Talker device at a Layer-3 about
said available bandwidth.
- [Claim 8] (No change) The method of claim 3, further comprising:
the Listener device informing a centralized device about said
available bandwidth in terms of a video format that can be
supported at the Listener device.
- [Claim 9] (No change) The method of claim 5, further comprising:
sending the Talker Advertise Failed message back to the Talker
device, informing the Talker device about said available bandwidth
on a path from the Talker device to the Listener device, wherein the
Talker device is informed of the minimum end-to-end available
bandwidth on a path from the Talker device to the Listener device.

- [Claim 10] (No change) The method of claim 9, further comprising:
the Talker device re-issuing another Talker Advertise with a traffic specification based on the minimum end-to-end bandwidth on the path from the Talker device to the Listener device; and
the Talker device receiving said Listener Ready message corresponding to the Talker Advertise Message, and starting data streaming to the Listener device.
- [Claim 11] (No change) The method of claim 1, wherein the bridged network comprises an Audio Video Bridging (AVB) network of AV devices.
- [Claim 12] (No change) The method of claim 2, wherein:
the network comprises multiple bridge devices; and
adjusting the available bandwidth (BW) along the path of Talker to Listener with multiple bridges, including each intermediate bridge device receiving the Talker Advertise message, checking bandwidth availability on an output port thereof for the streaming, and updating modified traffic specification to indicate said information about available bandwidth.
- [Claim 13] (No change) The method of claim 2, further comprising:
a bridge responding with a Talker Advertise Failed message to the Talker device, without waiting for a response from the Listener device.
- [Claim 14] (Canceled)
- [Claim 15] (Amended) The method of claim 1, wherein Talker Advertise message includes information about available bandwidth comprising:
Downstream BW (Bandwidth),
Upstream BW,
Downstream available BW,
Upstream available BW,
PER,
Link type,
Latency,
Hopcount,
Currently admitted StreamIDs.
- [Claim 16] (Canceled)
- [Claim 17] (Canceled)
- [Claim 18] (Canceled)
- [Claim 19] (Canceled)
- [Claim 20] (Canceled)
- [Claim 21] (Canceled)
- [Claim 22] (Canceled)
- [Claim 23] (Canceled)
- [Claim 24] (No change) A bridged communication system, comprising:
a Talker device, a Listener device and multiple bridge devices in a bridged audio video (AV) network;
wherein the Talker device sends a Stream Reservation Protocol

- (SRP) SRP Talker Advertise message for streaming data to the Listener device, the Talker Advertise message including communication path information from the Talker device to the Listener device;
- wherein a communication path from the Talker device to the Listener device is selected based on said path metrics, for streaming data between the Talker device and the Listener device.
- [Claim 25] (No change) The system of claim 24, wherein the Talker Advertise message includes information about available bandwidth comprising:
Downstream BW (Bandwidth),
Upstream BW,
Downstream available BW,
Upstream available BW,
PER,
Link type,
Latency,
Hopcount,
Currently admitted StreamIDs.
- [Claim 26] (No change) The system of claim 24, wherein:
at each device port on a communication path between the Talker device and the Listener device, the Talker Advertise message is processed by appending additional network bandwidth information to the Talker Advertise message.
- [Claim 27] (No change) The system of claim 26, wherein:
the Listener device receives the Talker Advertise message indicating end-to-end available bandwidth on a communication path from the Talker device to the Listener device.
- [Claim 28] (No change) The system of claim 26, wherein:
the Listener device receives multiple Talker Advertise messages, each Talker Advertise message indicating end-to-end available bandwidth on a communication path from the Talker device to the Listener device.
- [Claim 29] (No change) The system of claim 28, wherein:
the Listener device utilizes said Talker Advertise messages from said Talker device for a particular stream, to select a particular path based on the path metrics suitable to meet the streaming.
- [Claim 30] (No change) The system of claim 29, wherein:
the Listener device indicates said selection to the Talker device wherein intermediate nodes allocate and reserve the resources for the particular ensuing stream.
- [Claim 31] (No change) The system of claim 30, wherein:
the Listener device sends a message to the Talker device about bandwidth to be allocated, the listener message including a list of links in the selected communication path.
- [Claim 32] (No change) The system of claim 28, wherein the Listener device selects a

backup communication path for said stream.

[Claim 33] (No change) The system of claim 24, wherein the bridged network comprises an Audio Video Bridging (AVB) network of AV devices.