Appeal decision

Appeal No. 2018-4526

Appellant	Samsung Electronics Co., Ltd.
Patent Attorney	ABE, Tatsuhiko
Patent Attorney	JITSUHIRO, Shinya
Patent Attorney	CHOI, YunJin
Patent Attorney	KIUCHI, Keiji

The case of appeal against the examiner's decision of refusal of Japanese Patent Application No. 2014-539884, entitled "APPARATUS AND METHOD FOR TRANSMITTING AND RECEIVING APPLICATION LAYER-FORWARD ERROR CORRECTION PACKET IN MULTIMEDIA COMMUNICATION SYSTEM" (International Publication No. WO 2013/069983 published on May 16, 2013, National Publication of International Patent Application No. 2014-533032 published on December 8, 2014) has resulted in the following appeal decision.

Conclusion

The appeal of the case was groundless.

Reason

No. 1 History of the procedures

The present application was filed on November 8, 2012 (Priority Claim received by foreign receiving office under the Paris Convention on November 8, 2011 (South Korea), October 8, 2012 (South Korea)), and the history of the procedures is as follows.

as of April 28, 2016:	Notification of reasons for refusal
August 9, 2016:	Submission of Written opinion and Written amendment
as of January 16, 2017:	Final notification of reasons for refusal
June 23, 2017:	Submission of Written opinion and Written amendment

as of November 27, 2017: Examiner's decision of refusal
April 4, 2018: Appeal against the examiner's decision of refusal, submission of Written amendment
as of January 23, 2019: Notification of reasons for refusal
May 7, 2019: Submission of Written opinion and Written amendment

No. 2 The Invention

The invention according to Claim 1 of the scope of claims amended by the written amendment submitted on May 7, 2019 (hereinafter referred to as "the Invention") is as follows. (The underlines were added by the appellant.)

"A method for transmitting an Application Layer-Forward Error Correction (AL-FEC) packet by an AL-FEC packet transmission apparatus in a multimedia communication system, comprising the steps of:

generating a plurality of AL-FEC packets, wherein each of the AL-FEC codeword packets includes one AL-FEC codeword symbol and an AL-FEC header, and the AL-FEC codeword symbol is one of AL-FEC codeword symbols included in an AL-FEC codeword block;

outputting the AL-FEC packets, which are fewer in number than the AL-FEC codeword packets, by puncturing at least one of the AL-FEC codeword packets based on puncturing information; and

transmitting the output AL-FEC packets to an AL-FEC packet reception apparatus,

wherein, when serial numbers (SNs) are allocated independently of symbol type to the AL-FEC codeword symbols included in the AL-FEC codeword block, the AL-FEC header includes first order information indicating an order of the one AL-FEC codeword symbol out of the SNs allocated independently of the symbol type to the AL-FEC codeword symbols included in the AL-FEC codeword block, or

when SNs are allocated in association with symbol type to the AL-FEC codeword symbols included in the AL-FEC codeword block, the AL-FEC header includes second order information indicating the SN of the one AL-FEC codeword symbol out of the SNs allocated in association with the symbol type to the AL-FEC codeword symbols included in the AL-FEC codeword block, and information indicating symbol type of the one AL-FEC codeword symbol included in the AL-FEC packet."

No. 3 Reasons for refusal

Reason 3 of the reasons for refusal as of January 23, 2019 notified by the body (hereinafter referred to as "Reasons for refusal by the body") is summarized below.

The inventions according to Claims 1 to 10 could have been easily invented by a person ordinarily skilled in the technical field of the inventions before the filing of the application based on the invention described in the following Cited Document 1 distributed in Japan or a foreign country before the application was filed or made available to the public through electric telecommunication lines, or based on the invention described in Cited Document 1 and the invention described in Cited Document 2. Thus, the appellant should not be granted a patent for the inventions under the provisions of Article 29(2) of the Patent Act.

1. U.S. patent publication No. 2011/0219279 Specification

2. Japanese Unexamined Patent Application Publication No. 2000-228676

No. 4 Description in Cited Document, Cited Invention

1 Description in Cited Document 1 and Cited Invention 1

(1) The patent specification of U.S. patent publication No. 2011/0219279 (hereinafter referred to as "Cited Document 1") cited in the Reasons for refusal by the body describes the following matters. (The underlines were added by the body. The same applies hereafter.)

A "[0042] FIG. 4 illustrates an AL-FEC scheme according to an embodiment of the present disclosure. The vertical hyphenated line separates the functional layers of a transmitting device 400 and a receiving device 450. The dotted line indicates data being transmitted from the transmitting device 400 to the receiving device 450. With respect to the AL-FEC framework, the transmitting device 400 includes a physical (PHY) layer 440, a media access control (MAC) layer 430, a protocol adaptation layer (PAL) 410, and the AL-FEC component 420. Similarly, the receiving device 450 includes a PHY layer 490, a MAC layer 480, a PAL 460, and an AL-FEC component 470. Each of the transmitting device 400 and the receiving device 450 may be one of the may be any wireless communication devices, such as the WiGig enabled devices 102-110. (Note by the body: The description in the original document, "one of the may be any", is considered to be an error for "one of the any".)

[0043] The general operation of the transmitting device 400 in the AL-FEC scheme, according to an embodiment of the present disclosure, is as follows. In the transmitting device 400, a set of source packets to be protected together is specified. The source packets are reshaped to form a set of equal-sized source symbols. (Note by the body: The description in the original document, "to forma set" is considered to be an

error for "to form a set".) An AL-FEC code is applied on the source symbols to produce a set of repair symbols. After the repair symbols are encapsulated into repair packets, the transmitting device 400 sends the source packets and the repair packets to the receiving device 450.

[0044] The general operation of the receiving device 450 in the AL-FEC scheme, according to an embodiment of the present disclosure, is as follows. If all source packets are received successfully by the receiving device 450, then the received source packets are handled without AL-FEC recovery, and the received repair packets are discarded. In contrast, if there are missing source packets, the AL-FEC scheme will be applied to the successfully received source and repair packets to recover the missing source packets.

[0045] The protocol adaption layer (PAL) 410 at the transmitting device 400 receives source data (e.g. application packets) from an upper layer (not illustrated), prepares packets to be transmitted, and sends the packets to the MAC layer 430. To this end, the PAL 410 may first specify the set of source packets (called source block) to be protected by selecting a suitable source block size (k symbols) and a suitable symbol size (T bytes), such that:

[0046] a) The PAL 460 at the receiving device 450 is capable of buffering T×m bytes (where m is the number of symbols that the receiver decodes per block).

[0047] b) For low overhead, k is chosen to be as large as possible from a predetermined interval such as [500, 8192]. If only a small number of options for k is required, then k is chosen from a predetermined set (e.g. from among 512, 1024, 2048, 4096, and 8192). If only one option for k is allowed, then l is set to a default value (e.g. 1024).

[0048] c) Latency constraints put an upper bound on k. Note that the latency increases as k increases.

[0049] The set of source packets should have T×k bytes of payload.

[0050] PAL 410 generates a source block number (SBN) and sends the source block, SNB, k, and T to the AL-FEC component 420. (Note by the body: The description in the original document, "SNB", is considered to be an error for "SBN".) PAL 410 also constructs the source packets by appending the header information to the source packet payload and sends the source packets and repair symbols received from the AL-FEC 420 to the MAC layer 430. The functions of the PAL 410 and the MAC layer 430 may be performed by a processor or controller of a wireless communication device.

[0051] At the receiving device 450, the PAL 460 receives packets (source packets and repair packets) from the MAC layer, recovers the source data, and sends the source data to an upper functional layer (not illustrated). To that end, PAL 460 determines

whether all source packets are received successfully. If all source packets have been received successfully received, the source packets are handled without AL-FEC recovery, and the repair packets are discarded. (Note by the body: The description in the original document, "received successfully received,", is considered to be an error for "received successfully,". In contrast, if there are missing packets, PAL 460 sends the successfully received source and repair packets to the AL-FEC component (470). PAL 460 gets the recovered source packets from the AL-FEC component 470."

B "[0053] The AL-FEC component 420 at the transmitting device 400 applies AL-FEC code on the source data to generate repair symbols, and encapsulates the repair symbols into repair packets. In an alternative embodiment, the repair symbols may be encapsulated into repair packets by the PAL 410. In the receiving device 450, the AL-FEC component 470 decodes the source and repair packets received from the PAL using the AL-FEC scheme to recover missing packets. In some embodiments, the AL-FEC components 420 and 470 or the functions of the AL-FEC components 420 and 470 may be integrated into the PALs 410 and 460, respectively. Also, in some embodiments, each of the PALs 410 and 460, AL-FEC components 420 and 470, MAC layers 430 and 480, and PHY layers 440 and 490 of the transmitting device 400 and the receiving device 450, respectively, may be configured to perform functions related to both transmission and reception."

C "[0072] FIG. 7 illustrates a description of a header of a packet that has been encoded using an AL-FEC scheme according to an embodiment of the present disclosure. In some embodiments the packet header 700 may be generated and appended at the particular functional layer at which the AL-FEC scheme is performed. For example, in an embodiment in which the AL-FEC scheme is performed in the PAL, the packet header 700 may be generated and appended to the outgoing packets from the PAL.

[0073] Each column in packet header 700 corresponds to at least one field. The text in each block of the upper row describes the information included in the packet header field, and the numbers in the lower row indicate the octet length (number of bytes) of the respective header fields. The PacketType header field, which has a length of one octet (8 bits), indicates whether the packet is systematic (e.g. contains data) or parity.

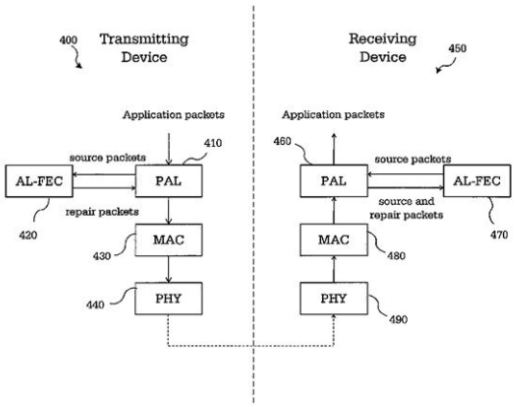
[0074] In an embodiment, a single bit (e.g. the first bit) may be allocated in the PacketType field to distinguish a parity packet from a systematic (e.g. data) packet. When using a single bit to indicate a parity packet, a '0' may be used to indicate that the

packet is systematic (data), and a '1' may be used to indicate that the packet is parity (or vice versa). For example, a PacketType header field with a value of "1xxxxxxx" may indicate a parity packet while "0xxxxxxx" may indicate a systematic packet. In an embodiment, a single bit may be allocated in any other packet header field.

[0075] In another embodiment, a specific 8-bit value in the PacketType field may be defined in the WiGig specifications to indicate a parity packet. For example, a value of '0×80' (or "10000000") may indicate a parity packet. Alternatively, a specific value may be used in another header field to distinguish a parity packet from systematic packets.

[0076] The stream identifier (ID) identifies the data stream to which the packet belongs. In an embodiment, the stream ID may refer to a block of transmission. The sequence number (SeqNum) may identify the sequential order of the packet within the block. The length field may indicate the size of the payload or the total number of packets in the block, depending on the embodiment."

D FIG. 4



E FIG. 7

PacketType	StreamID	SeqNum	Length	Other Headers	Payload
1	1	2	2	Variable	Variable

(2) The following matters are found in the description in (1).

A transmitting device 400 transmits source packets and repair packets to a receiving device 450 ([0042], [0043]).

A PAL 410 of the transmitting device 400 constitutes the source packets with header information added thereto ([0045], [0050]).

A set of the source packets is called a source block. The size of the source block is k source symbols ([0043], [0045]).

The PAL 410 transmits the source block to an AL-FEC component 420 ([0050]).

The AL-FEC component 420 of the transmitting device 400 applies an AL-FEC code on source symbols to produce repair symbols. The PAL 410 encapsulates the repair symbols into repair packets ([0043], [0053]).

A header of a packet encoded using AL-FEC scheme includes a sequence number identifying a sequential order of the packet ([0072], [0076]).

(3) According to the above (1) and (2), it is recognized that Cited Document 1 describes the following invention (hereinafter referred to as "Cited Invention 1").

"A method of transmitting by a transmitting device source packets and repair packets,

wherein a PAL constituting the source packets includes the steps of: encapsulating repair symbols into repair packets, wherein a set of the source packets is called a source block, the size of the source block is k source symbols, the repair symbols are produced by applying an AL-FEC code on source symbols in an AL-FEC component to which the source block has been sent; and

transmitting the source packets and the repair packets to a receiving device,

wherein a header of a packet encoded using AL-FEC scheme includes a sequence number identifying a sequential order of the packet."

2 Description in Cited Document 2 and Cited Invention 2

(1) Japanese Unexamined Patent Application Publication No. 2000-228676 (hereinafter referred to as "Cited Document 2") cited in the Reasons for refusal by the body describes the following matters.

A "[0017]

[Embodiments of the invention] Embodiments of the invention are described below.

(Embodiment 1) A data transmission method of Embodiment 1 of the invention is configured to determine priority added to each of an input packet from a transmitting side, an input packet to be retransmitted (retransmission packet), and a correction packet including an error correction code (FEC packet), to transmit only packets having priority equal to or higher than a predetermined value.

[0018] FIG. 1 is a block diagram showing a data transmission apparatus of Embodiment 1. The data transmission apparatus 101 of Embodiment 1 includes a relay server which relays transmission data between a delivery server (transmitting side) and a terminal (receiving side). The data transmission apparatus 101 includes: receiving means 11 which receives an input packet transmitted from the delivery server; transmission queue management means 12a which sets transmission order of the received input packet, the packet to be retransmitted (retransmission packet), and the FEC (Forward Error Correction) packet (correction packet) storing an error correction code, based on predetermined information; and transmission means 13 which transmits the packets in the transmission order set by the means 12a. The transmission queue management means 12a is configured to include a transmission queue (not shown) as a data buffer for storing temporarily the input packet received in the receiving means 11.

[0019] The data transmission apparatus 101 includes: a retransmission buffer 18a for storing a predetermined input packet as a retransmission packet; packet priority determination means 15 which determines priority of the input packet, retransmission packet, and FEC packet; and retransmission buffer management means 18 which controls the retransmission buffer 18a so that data of the packets having priority equal to or higher than a predetermined value may be stored in the retransmission buffer 18a, on the basis of the determined packet priority.

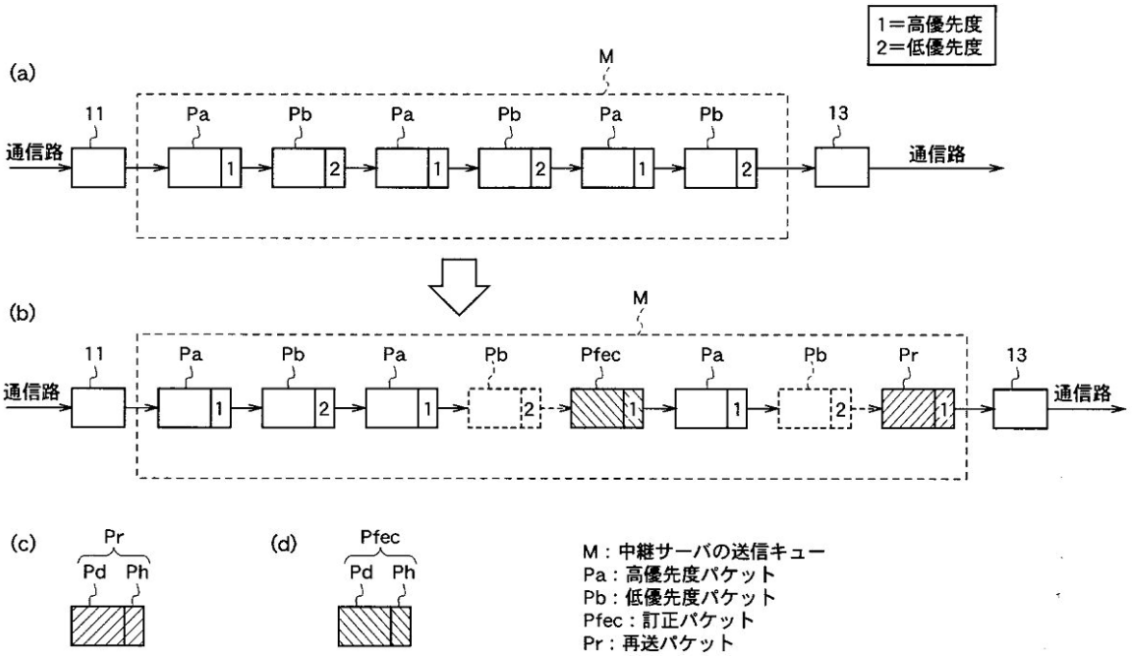
[0020] The data transmission apparatus 101 includes retransmission instruction receiving means 14 which receives an instruction for a retransmission request from a receiving terminal, and FEC packet generation means 19 which generates a FEC packet (correction packet) storing an error correction code corresponding to a designated packet based on the priority of the packets.

[0021] The data transmission apparatus 101 includes output delay calculation means 17a which calculates latency (reproduction latency) required to reproduce data of the packets on the receiving terminal in the transmission queue management means 12a based on transmission order information of packets from the transmission queue management means 12a, and transmission packet determination means 16 which determines a packet to be transmitted on the basis of the retransmission request from the receiving side, priority information of the packets, and reproduction latency of the packets, to output a result determined in the determination means 16, as predetermined information to the transmission queue management means 12a.

[0022] Functions and effects are described below. FIG. 2 is a schematic diagram for illustrating transmission rate control in a data transmission apparatus in Embodiment 1. FIG. 2(a) shows that a packet (input packet) transmitted from a delivery server is stored

in a transmission queue of the relay server (data transmission apparatus) 101, and FIG. 2(b) shows that the order in which the packets in the transmission queue of the relay server are transmitted has been set. In the data transmission method in Embodiment 1, in transmitting a retransmission packet Pr and an FEC packet Pfec, as well as transmitting input packets Pa, Pb, low-priority packets Pb corresponding to the size of the packets to be transmitted are decimated, thereby suppressing changes of output rate."

B FIG. 2



通信路	communication path
高優先度	high-priority
低優先度	low-priority
中継サーバの送信キュー	transmission queue of relay server
高優先度パケット	high-priority packet
低優先度パケット	low-priority packet
訂正パケット	correction packet
再送パケット	retransmission packet

(2) According to the description in (1) (especially in [0018], [0022]), it is recognized that Cited Document 2 describes the following invention (hereinafter referred to as "Cited Invention 2").

"A data transmission apparatus including receiving means that receives input packets, and transmission means that transmits the packets in a set transmission order, configured, in transmitting a retransmission packet and an FEC packet, as well as transmitting input packets Pa, Pb, to decimate low-priority packets Pb corresponding to the size of the packets to be transmitted, thereby suppressing changes of output rate."

No. 5 Comparison/Judgment

Before the term, "the AL-FEC codeword packets", in the Invention, there is a description "a plurality of AL-FEC packets", but "a plurality of AL-FEC codeword packets" are not described. Thus, all of the terms "AL-FEC codeword packet" described in the Invention are recognized as an error for "AL-FEC packet". In the following description, the "AL-FEC codeword packet" is replaced with "AL-FEC packet".

1 Comparison

The Invention and the Cited Invention 1 are compared.

(1) The "source packet" and "repair packet" in Cited Invention 1 are multiple packets in their entirety. Since the "repair packet" is produced by "applying an AL-FEC code on source symbols", the "source packet" and "repair packet" are generally referred to as "AL-FEC packets" arbitrarily. Thus, the "transmission apparatus" and "reception apparatus" in Cited Invention 1 correspond to the "Application Layer-Forward Error Correction (AL-FEC) packet transmission apparatus" and "AL-FEC packet reception apparatus", respectively.

(2) In Cited Invention 1, both "constituting" the "source packets" and "encapsulating" into the "repair packets" are producing packets.

(3) In Cited Invention 1, "a set of the source packets is called a source block. The size of the source block is k source symbols", and "repair symbols are encapsulated into repair packets". Thus, the "source packets" include some of "k source symbols", and the "repair packets" include some "repair symbols". The "source symbols" and the "repair symbols" are generally referred to as "AL-FEC codeword symbols" arbitrarily.

(4) In Cited Invention 1, a "source block" of the "source block size" equal to "k source symbols" is transmitted to "AL-FEC component", to produce "repair symbols". Thus,

it can be said that "k source symbols" of the "source block" and the "repair symbols" produced therefrom constitute a block in its entirety. The constituted block is referred to as an "AL-FEC codeword block" arbitrarily. Therefore, each of the "AL-FEC codeword symbols" in (3) are symbols included in "AL-FEC codeword block".

(5) It is obvious that the "header of a packet encoded using AL-FEC scheme" in Cited Invention 1 is headers of "source packets" and "repair packets". The headers are referred to as "AL-FEC headers" arbitrarily. The "sequence numbers identifying sequential order of the packets" in Cited Invention 1 are sequence numbers allocated to a plurality of packets. The "sequential order of the packet" is order information of one packet out of all allocated sequence numbers, and corresponds to the "serial number (SN)" in the Invention, apart from an object indicated by the order information.

The matters specifying the invention of the Invention, "when serial numbers (SNs) are allocated independently of symbol type to the AL-FEC codeword symbols included in the AL-FEC codeword block, the AL-FEC header includes first order information indicating an order of the one AL-FEC codeword symbol out of the SNs allocated independently of the symbol type to the AL-FEC codeword symbols included in the AL-FEC codeword block, or

when SNs are allocated in association with symbol type to the AL-FEC codeword symbols included in the AL-FEC codeword block, the AL-FEC header includes second order information indicating the SN of the one AL-FEC codeword symbol out of the SNs allocated in association with the symbol type to the AL-FEC codeword symbols included in the AL-FEC codeword block, and information indicating symbol type of the one AL-FEC codeword symbol included in the AL-FEC packet", are recognized as alternative choices from two descriptions before and after "or".

Comparing the first half of the above matters specifying the invention of the Invention with the description in Cited Invention 1, "A header of a packet encoded using AL-FEC scheme includes a sequence number identifying a sequential order of the packet", they are identical in that the "AL-FEC header includes order information indicating an order of one AL-FEC packet out of SNs allocated to a plurality of AL-FEC packets".

(6) In light of the above, the Invention and Cited Invention 1 are identical in the following point:

"A method for transmitting an Application Layer-Forward Error Correction (AL-FEC) packet by an AL-FEC packet transmission apparatus, comprising the steps of:

generating a plurality of AL-FEC packets, wherein each of the AL-FEC packets includes one AL-FEC codeword symbol and an AL-FEC header, and one AL-FEC codeword symbol is one of AL-FEC codeword symbols included in an AL-FEC codeword block; and

transmitting the AL-FEC packets to an AL-FEC packet reception apparatus,

wherein the AL-FEC header includes order information indicating an order of one AL-FEC packet out of SNs allocated to the AL-FEC packets."

(7) There are the following different features between the Invention and Cited Invention 1:

(Different Feature 1) The "method for transmitting an AL-FEC packet" is "in a multimedia communication system" in the Invention, while Cited Invention 1 does not include such specification.

(Different Feature 2) The number of "AL-FEC codeword symbols" included in "each of the AL-FEC packets" is "one" in the Invention, while Cited Invention 1 does not specify the number of "source symbols" included in the "source packet".

(Different Feature 3) The Invention includes the "step of outputting the AL-FEC packets, which are fewer in number than AL-FEC codeword packets, by puncturing at least one of the AL-FEC codeword packets based on puncturing information", while Cited Invention 1 does not include the step.

(Different Feature 4) Regarding the corresponding feature, "SNs allocated to the AL-FEC packets", the Invention is configured so that the SNs are allocated to "the AL-FEC codeword symbols" included in the AL-FEC packet, while Cited Invention 1 is configured so that SNs are allocated to a plurality of "packets". Accordingly, regarding the corresponding feature, "order information indicating an order of one AL-FEC packet" included in "the AL-FEC header", the contents of the order information is an order of "the one AL-FEC codeword symbol" in the Invention, while the contents of the order information in the Cited Invention 1 is an order of one "packet".

(Different Feature 5) In the Invention, the "AL-FEC header" "includes first order information" "when serial numbers (SNs) are allocated independently of symbol type to the AL-FEC codeword symbols included in the AL-FEC codeword block", and allocation of "SN" is performed "independently of the symbol type". The Cited Invention 1 does not include above specifications regarding the constitution that the "AL-FEC header" "includes first order information" and the allocation of "sequence numbers".

2 Judgment

(1) Different Feature 1 is examined below.

As described in [0032] of Cited Document 1, multimedia communication is a well-known art. A person skilled in the art could have conceived of using multimedia communication system for "method for transmitting" in Cited Invention 1 appropriately.

(2) Different Features 2 and 4 are examined below.

The number of symbols included in one packet is only a design matter. In Cited Invention 1, a person skilled in the art could have conceived of defining the number of "source symbols" and "repair symbols" included in the "source packet" and "repair packet" respectively, as "one", appropriately. When the number of the included symbols is "one", the "sequence number identifying a sequential order of the packet" included in the "header" of the Cited Invention 1 may be allocated to each of the "source symbol" and "repair symbol", or may be allocated to a plurality of AL-FEC codeword symbols included in an AL-FEC codeword block. The "header" in Cited Invention 1 may include an order of one "source symbol" or "repair symbol" out of the "sequence numbers", or order information indicating an order of one AL-FEC codeword symbol.

(3) Different Feature 3 is examined below.

Cited Invention 1 and Cited Invention 2 are identical in a point of relating to transmission of packets including FEC codes.

The configuration of, in transmitting FEC-encoded data, outputting a smaller number of FEC-encoded packets by puncturing a part of the FEC-encoded data based on puncturing information, is a matter of well-known art. Cited Invention 2 is one example thereof.

Therefore, a person skilled in the art could have conceived of applying Cited Invention 2 to Cited Invention 1, decimating required packets "corresponding to the size" from the "source packet and repair packet" on the basis of puncturing information prior to the "step of transmitting source packets and repair packets to a receiving device", or including a step of puncturing at least one packet and outputting packets fewer in number than the number of "source packet and repair packet" not punctured, appropriately.

It can be said that the processing of "decimating low-priority packets Pb corresponding to the size" in Cited Invention 2 is performed based on information

indicating "the amount corresponding to the size" for the number of "low-priority packets Pb" to be decimated, or based on puncturing information.

The specification [0066] describes that "puncturing information is decided in accordance with characteristics of FEC code, channel state, and buffer capacity of a receiver". In Cited Invention 1, it is obvious from common general technical knowledge that the number of "repair packets" obtained by "encapsulating" generated "repair symbols" changes depending on the characteristics of "AL-FEC code". Even if the "puncturing information" in the Invention is limited depending on "characteristics of FEC code", information corresponding to the number of packets to be punctured corresponds to the "puncturing information" in the Invention.

(4) Different Feature 5 is examined below.

Inevitability of allocating "sequence number" to "packet" in Cited Invention 1, in association with as to whether the "packet" is "source packet" or "repair packet", i.e., packet type, is not described or indicated in Cited Document 1. The allocation is independent of packet type, obviously.

When the number of "source symbols" and "repair symbols" included in "source packet" and "repair packet" in Cited Invention 1, as examined in (2), is "one", allocating "sequence number" to a packet and allocating "sequence number" to a symbol are substantially the same.

Therefore, a person skilled in the art could have easily conceived that the "sequence number" in Cited Invention 1 is allocated independently of symbol type, and that the "header" in Cited Invention 1 "includes sequence number" when the "sequence number" is allocated "independently of symbol type to the plurality of AL-FEC codeword symbols included in the AL-FEC codeword block".

(5) The functions and effects of the Invention could be predicted by a person skilled in the art from Cited Invention 1 and Cited Invention 2.

No. 6 Closing

As described above, the Invention could have been easily made by a person skilled in the art based on Cited Invention 1 and Cited Invention 2. The appellant should not be granted a patent for the invention under the provisions of Article 29(2) of the Patent Act. The present application should be rejected without examining other claims.

Therefore, the appeal decision shall be made as described in the conclusion.

August 14, 2019

Chief administrative judge:	YOSHIDA, Takayuki
Administrative judge:	TOMIZAWA, Tetsuo
Administrative judge:	MARUYAMA, Takamasa